CALFED Bay-Delta Program
Finance Plan

California Bay-Delta Authority

January 2005

Agenda Item: 8-12
Meeting Dates: December 8 and 9, 2004 **Amended December 9, 2004**

CALIFORNIA BAY-DELTA AUTHORITY
RESOLUTION 04-12-03

ADOPTING THE CALFED BAY-DELTA PROGRAM FINANCE PLAN AS A FRAMEWORK FOR GUIDING THE FINANCING OF THE CALFED PROGRAM FOR THE NEXT TEN YEARS

WHEREAS, a fundamental philosophy of the CALFED Bay-Delta Program—referred to in the Record of Decision and in State and Federal CALFED acts—is that costs should, to the extent possible, be paid by the beneficiaries of the program actions;

WHEREAS, the July 2000 CALFED Final EIS/EIR called for development of a finance plan that would follow a benefits based approach;

WHEREAS, development of a finance plan can increase the effectiveness of the CALFED Bay-Delta Program by refining program priorities and funding targets, and allocating program costs to appropriate beneficiaries;

WHEREAS, Authority staff has performed a comprehensive review of Program funding targets, available funding, benefits, and beneficiaries;

WHEREAS, Authority staff has convened an Independent Panel of experts to review and advise BDA on the framework and options for developing a finance plan;

WHEREAS, Authority staff has developed a finance plan through an open process involving numerous meetings and workshops that included interested stakeholders and implementing agencies;

WHEREAS, staff has developed a finance plan that spans a 10-year period that contains, for all program elements in the Program, new funding targets, description of program benefits and beneficiaries, and cost allocations for State, Federal, major water users, and local grant matching requirements; and

WHEREAS, the finance plan process, issues, and drafts of this staff proposal were discussed at all the Bay-Delta Authority (BDA) and Bay-Delta Public Advisory Committee (BDPAC) meetings in 2004; and at a joint BDA /BDPAC Workshop on November 15, 2004; and at BDPAC subcommittee meetings in 2004; and at over 30 ad-hoc agency and stakeholder meetings in 2004; where extensive public input was received.

NOW, THEREFORE, BE IT RESOLVED that the California Bay-Delta Authority adopts the CALFED Bay-Delta Program Finance Plan as a framework for guiding the financing of the CALFED Program for the next ten years, and authorizes the Director, to work with the State and Federal Administrations, implementing agencies, stakeholders, the Legislature and Congress regarding implementation of the Plan.

IT IS FURTHER RESOLVED that the Director, shall continue working with the State and Federal Administrations, implementing agencies, stakeholders, the Legislature and Congress on refining the details of the Plan, and shall bring relevant issues back to the California Bay-Delta Authority and the Bay-Delta Public Advisory Committee for further consideration.

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INTRODUCTION

Based on direction from the California Bay-Delta Authority (BDA) and the Bay-Delta Public Advisory Committee (BDPAC) and consistent with advice given by the Finance Plan Independent Review Panel, BDA staff has worked with stakeholders and agencies to develop this Finance Plan which will serve as a framework to guide the financing of the CALFED Program over the next 10 years (2005–2014).

The need to do a comprehensive analysis of program objectives, future funding targets, and proposed cost sharing for CALFED was prompted by: 1) the fact that current funding sources (primarily bond funds) will soon be depleted, 2) the review of program benefits and beneficiaries is needed to support a benefits-based cost allocation as called for in the Record of Decision, and 3) the status quo approach to funding the Program primarily through State bonds is being challenged due to the current state fiscal crisis and the pressure by the State Legislature to expand the financial contributions from beneficiaries of the Program.

This effort has been and will continue to be a controversial undertaking. Though the concept of beneficiary pays is broadly supported, the task of putting such a principle in place is a difficult one. There are many uncertainties regarding CALFED Program actions, targets, costs, and benefits—and cost-sharing arrangements cannot be negotiated in the abstract. BDA staff recognizes the importance of working with state and federal agencies and interested stakeholders to develop a Finance Plan that acknowledges and develops strategies to address the uncertainties, yet moves forward with cost-sharing proposals on those parts of the program where information is sufficient.

This Finance Plan includes funding and cost-sharing targets for each of the Program's 10 elements. For some Program elements, the proposed funding and cost-sharing targets are specific, broadly supported and unlikely to change. For others, there is more uncertainty and a program and funding review is recommended in two to three years. In all cases, the level of certainty on targets and benefits is higher in the near-term. For that reason, the Program element approach distinguishes between near-term and longer-term projections. It also embeds an adaptive management loop that identifies strategies for refining targets and allocations as better data becomes available or as actual funding levels deviate from proposed Finance Plan cost-shares.

This Finance Plan has been informed by numerous public meetings with stakeholders and agencies. These discussions have helped to increase the understanding of the finance issues facing the CALFED Bay-Delta Program. They also have helped to crystallize the overarching principles and guidelines used by staff and consultants to craft the proposals. These principles—summarized elsewhere in this document—should provide guidance to future discussions even as funding targets change or specific cost-sharing agreements are reached.

One final note: The Finance Plan is just that—a "plan." Ideally, it will be a plan that all the CALFED agencies and stakeholders will embrace and can use to create a unified voice for future CALFED Bay-Delta Program funding. The Plan is a recommendation by the BDA to the State and federal agencies and is contingent on future appropriations and availability of funds. To implement the plan, each element or project/action will either require Congressional authorization and/or appropriation, and State legislative and/or voter authorization and appropriation. In addition, the Plan proposes changes to existing laws and regulations which will require legislative changes before State and federal agencies can revise funding allocations.

BACKGROUND

The Finance Plan summarized in this document builds on several distinct efforts dating back to the earliest days of CALFED Program planning. It also represents the culmination of several years work by BDA staff, CALFED agency representatives, stakeholders and consultants.

In both the Final Programmatic EIS/EIR and the August 2000 Record of Decision financing issues focused on identifying funding needs, proposed schedules and possible cost shares for the program's first seven years. The ROD also included a specific (though never acted upon) proposal for a broad-based user fee to fund the Ecosystem Restoration Program.

The current finance planning comprehensive review began in 2003 when BDA staff and consultants generated a series of papers intended to better understand the Program's longer-term financing issues and options.

- First, in October 2003, BDA prepared the Finance Plan Framework and Issues Report which lays out overarching principles and a preliminary approach for developing a long-term Finance Plan.

- Second, in May 2004, BDA prepared the May 2004 Draft Finance Options Report—a detailed Element-by-Element analysis at program costs, benefits, beneficiaries and possible cost-share allocations over the next 30 years.

- Third, BDA convened an Independent Panel of experts in 2004 to review and critique the Framework and Options Report. The Draft Finance Options Report and the Independent Panel review served as a foundation for the evolving Finance Plan.

The panel's review and deliberations generated critical guidance and recommendations. Among the key pieces of guidance offered by the Panel: (1) focus initial Finance Planning efforts on a more realistic 10-year time horizon; (2) foster a bottom-up discussion with stakeholder and agency representatives to better assess their willingness to pay; and, (3) devise a finance strategy that embeds accountability and flexibility. Staff believes its most recent planning effort effectively addresses these recommendations.

Information from the Draft Finance Options Report has informed the Finance Plan by providing a solid basis for program costs and benefits, and provided focus for stakeholder and agency review and comment. At this point, although BDA staff does not anticipate finalizing the Draft Finance Options Report, it does expect it will continue to provide important background information.

Documents related to the Panel, the Draft Finance Options Report and other past Finance Planning are available online at: calwater.ca.gov/FinancePlanning/FinancePlanning.shtml.

PROCESS

In recent months, BDA staff has dedicated significant resources to working with agencies and stakeholders in an open and transparent process to discuss the issues regarding the costs and benefits in this Finance Plan. These conversations have taken place at BDPAC and BDA, with BDPAC Subcommittees, and in a series of topic-focused public meetings with stakeholder and agency representatives.

Below is a synopsis of the process used to develop the Finance Plan over the past six months. The process and schedule was intended to satisfy two needs: (1) ensure stakeholder and agency representatives are involved in the development of the plan; and (2) ensure a plan is developed in time to meet budgetary deadlines for the next state and federal fiscal years.

DEVELOPING INITIAL FUNDING TARGETS & UNMET FUNDING NEEDS

Draft information was prepared by Element and task including: proposed annual funding targets for a 10-year period and identification of available funding, remaining unmet needs and preliminary finance strategies. These papers were informed by meetings with stakeholder and agency representatives, including:

June BDA Meeting—Presented summary of expected cost estimates, available funding and unmet needs.

July 8th BDPAC Meeting—Presented updated funding targets and available funding, described process and schedule, and reviewed preliminary finance strategies.

August 11th & 12th BDA Meeting—Presented revised funding targets, discussed preliminary finance strategies, reviewed process and schedule, and highlighted issues.

REFINING FUNDING TARGETS AND FRAMING ISSUES

Issue Papers were developed for each Program Element laying out: likely activities and associated funding targets; current funding available; likely funding needs, and key issues and options for cost-sharing arrangements to cover the unmet funding needs. Numerous meetings were held with agency and stakeholder representatives, including:

August through September—Met with agencies, stakeholders and public interests to identify funding issues and to the extent possible reach agreement on cost allocations.

September 9th BDPAC Meeting—Presented and had in-depth discussion on Issue Papers. BDPAC meeting also served as public workshop to ensure broader input.

PREPARING DRAFT FUNDING TARGETS AND COST-SHARING ARRANGEMENTS

Working drafts were developed for each Program Element laying out: funding and performance history, proposed funding target, existing funding, proposed allocations, and unresolved issues and considerations. Commentary was included in each document to present both the rationale for targets and cost-shares. Agency/stakeholder meetings were held to review the draft plan:

September—Met with agencies, stakeholders and public interests to further discuss targets and possible cost-share arrangements.

October 14th BDA Meeting—In-depth presentation on Draft Finance Plan for information and discussion.

November 15th workshop—Presented and received comments on Final Draft Finance Plan

FINAL FINANCE PLAN

This Final Finance Plan was presented to BDPAC and BDA at their December 2004 joint meeting for comment by BDPAC and final approval by BDA. The Finance Plan was approved by unanimous vote. As stated in the BDA Resolution, BDA will "continue to working with State and Federal Adminstrations, implementing agencies, stakeholders, the Legislature and Congress on refining the details of the Plan, and shall bring relevant issues back to the BDA and BDPAC for further consideration.

In addition, each year BDA expects to use the Program Planning process to adjust element-specific funding targets, priorities, and actions to account for available funding and better data. Every three to five years, staff anticipates undertaking a more thorough evaluation of each element and, as necessary, propose revisions to the cost-share allocations. Finally, the Program anticipates ongoing research and analysis of each element's benefits and beneficiaries.

OVERVIEW

As noted earlier, it is important to emphasize that that the level of certainty associated with targets and benefits in the near-term (within the next three years or so) is higher than those associated with the out-years. There are many reasons for this uncertainty. Federal and state appropriations are not yet determined. Locals are still assessing their willingness to pay based on an analysis of their expected benefits. Evaluation of program performance and benefits to-date is ongoing and may impact future assessments of appropriate funding targets and cost-shares.

Recognizing this uncertainty, the Finance Plan embraces an adaptive management approach. Each Program Element identifies critical uncertainties associated with its analysis and specific strategies to develop better information. Periodic evaluations are called for within each Program Element to ensure the ongoing revision, as appropriate, of funding targets and costs-shares. The Finance Plan also puts forward an ongoing annual evaluation—described later in this section—to assess the Program's track record in meeting the proposed targets and cost-shares and, as appropriate and necessary, recalibrate actions and funding schedules.

GUIDING PRINCIPLES

The following finance principles were used in developing the Finance Plan and should be used in future finance efforts. These principles were generated from the discussions supporting the Draft Finance Options Report and the more recent agency and stakeholder meetings on the Finance Plan.

1) Support CALFED Solution Principles: The CALFED solution principles should always be kept at the forefront of any Bay-Delta finance discussion. Finance agreements should be crafted in a way deemed equitable, affordable, and durable. They should not result in significant redirected impacts and they should reduce Bay-Delta system conflicts.

2) Follow a Benefits-Based Approach: In developing finance allocations, the fundamental principle from the Record of Decision of beneficiaries-pays should be emphasized. All cost allocations should attempt to correlate program benefits with the groups receiving the benefits and recover costs accordingly.[1]

3) Public and User Benefits: All CALFED Bay-Delta Program benefits can be divided into two broad categories: public and resource user. The general public includes state and federal taxpayers and the resource users include water users, other local agencies, recreation, commercial fishing, flood protection and hydropower recipients. While there is often a lack of specific data to draw a clear line between the amount one group benefits versus another, it is important to try to maintain the distinction to ensure a benefits-based approach. For example, increased user fees should not address the lack of state General Fund dollars needed to support public benefits.

4) Reasonable Funding Targets: All CALFED agencies and stakeholders should strive to identify funding targets for the CALFED Bay-Delta Program that can meet program objectives, but have also focused on the highest priorities and maximized program efficiency. Additional funding for the Program should be requested from State or federal sources or from

1. This principle is not inconsistent with, nor should its application ignore, cost responsibility associated with impact mitigation. To the extent that a legal or regulatory liability for mitigating an impact has been identified, the Finance Plan's application of a benefits-based cost allocation should conform to these cost responsibilities. Program elements where responsibility for mitigating impacts has informed the analysis of program benefits includes DWQ, ERP, EWA, and Science (IEP).

resource users only after reasonable funding targets have been developed. In addition, while Program performance will increasingly be judged in future years by programmatic performance measures (i.e. fish populations, reduced flood damages in the Delta), inevitably one form of balance across the CALFED Program will continue to be the available funding to meet the funding targets—which further supports the need for funding targets to reflect high priorities and increased efficiencies.

5) Appropriate Use of Public Funds: Public funding should be commensurate with the degree of public benefit expected. Public funding should be prioritized for use in the following instances:

- where projects provide broad public benefits,
- where projects are locally cost-effective, but require public funding to overcome significant financial or institutional barriers or affect a systemic behavioral change;
- where public funding will result in project modifications yielding broad public benefits;
- where public funds can be used to address Environmental Justice and other social equity issues.

6) State and Federal Cost Share: Public cost-shares can include both state and federal taxpayer contributions depending on the distribution of benefits associated with each program. In the Finance Plan, an analysis of state and federal benefits was conducted and in some programs the analysis identified a specific state or federal cost share, and in other cases the cost share was not clearly defined and a 50-50 equal allocation of benefits and costs was assumed. In those instances where the allocation of benefits and costs between the state and federal taxpayers was difficult to calculate (e.g. ecosystem, watershed, water conservation, BDA science), the allocation of 50-50 cost shares should not constrain future requests for state or federal appropriations; a flexible approach to state and federal funding will be required to fund the public share of costs.

7) Benefit-Based Grant Programs: For grant programs, the funding splits are presented as average figures, but actual cost shares should be commensurate with the level of public vs local benefits. For example, in the Water Use Efficiency Program, the Plan assumes an aggregate cost share on agricultural water conservation of 40% local and 60% state/federal. Actual cost-shares are likely to vary by region, by project type, or other factors.

8) Use of Available Bond Funding: Public funding already dedicated to support CALFED Program elements should be fully utilized. If the CALFED Program has discretion in the use of already approved public funds they should be used to support the public's cost share. If public funds were voter-approved for specific projects or purposes they should be used for those projects and purposes even if this deviates from the Finance Plan cost allocation.

9) Allocation within Central Valley Project (CVP) and State Water Project (SWP): Cost-share arrangements should be limited to allocating costs among the state and federal governments, water users such as CVP and SWP, and locals. The Finance Plan should not attempt to allocate shares within an individual user group such as the CVP.[2]

10) Periodic Evaluation: In many, if not all Program elements, additional information is being developed that will better direct program priorities and as a result could modify proposed funding targets and allocations. Therefore, the Finance Plan should identify the timing for a check-in and the process for review of the program element priorities. In those programs where there is substantial uncertainty, the Finance Plan should identify a near-term and long-term approach to financing.

11) Accounting System to Review Program Benefits and Costs: Once the Finance Plan funding targets and cost allocations are adopted, a system should be developed that tracks the link between program benefits and revenue. This system will allow program contributors to look back on program spending to determine if contributions have been beneficial to the program and should be continued or not.

2. Some stakeholders have voiced the concern that allocation of costs or changes in operation by the CVP in response to the CALFED Program could result in redirecting cost impacts from CVP water contractors to power contractors. These potential impacts depend on the Bureau of Reclamation's cost allocation and rate setting policies for the CVP and are outside the purview of the Finance Plan.

FUNDING TARGETS

In developing this plan, the funding targets originally included in the CALFED Record of Decision (ROD) were reviewed and updated based on a review of several factors: program actions needed to meet program objectives, program priorities, revised schedules, and in several cases (i.e. Water Conservation and Ecosystem) a "budget constrained" funding target was developed to reflect the fiscal realities expected in the next five to 10 years. Summarized in Table 1 are the original ROD targets and the new Finance Plan targets. As indicated, the target for every program was reduced (except for a minor increase in Science) resulting in an overall reduction of 36% on an average annual basis. Each Program Element Finance Plan in the next section of this report includes information that describes the basis for the new target.

SUMMARY OF UNMET NEEDS AND PROPOSED FUNDING ALLOCATIONS

Tables 2 and 3 are a summary of the program element tables provided as part of each Program Element Finance Plan. Table 2 distinguishes between currently available funding and additional funding sources needed to meet the funding targets in the 10-year period. Table 3 adds the available funding and additional funding to generate the total funding allocated over the 10-year period by state, federal, water user and local grant matching sources.

The new 10 year funding target for the CALFED Program is $8.1 billion. Based on the available funding and the proposed allocations, the expected CALFED Program costs over the next 10 years should be shared as follows:

TABLE 1: FINANCE PLAN & ROD TARGETS
(average annual $ in millions)

Program Element	ROD Target	Finance Plan Target	Difference	Change
Ecosystem Restoration	$203	$150	-$53	-26%
Environmental Water Account	$50	$44	-$6	-12%
Water Use Efficiency	$422	$315	-$107	-25%
Water Transfers	$2	$1	-$2	-72%
Watershed	$43	$42	-$1	-1%
Water Quality	$96	$28	-$69	-71%
Levees	$63	$45	-$19	-30%
Storage	$204	$109	-$95	-47%
Conveyance	$132	$19	-$113	-86%
Science	$43	$44	$1	2%
Oversight & Coordination	n/a	$12	$12	100%
TOTAL	**$1,258**	**$807**	**-$451**	**-36%**

30% State taxpayer
21% Federal taxpayer
9% Water Users
40% Local Grant matching (includes water and power agencies, local governments, and other entities cost sharing in CALFED grants)

Together, U.S. and California taxpayers are expected to provide half of the Program's total funding needs over the next 10 years. This is an overall reduction of approximately 15% to the public based on the prior four years of funding for the

TABLE 2: AVAILABLE AND ADDITIONAL FUNDING NEEDED TO MEET TARGETS ($ in millions)

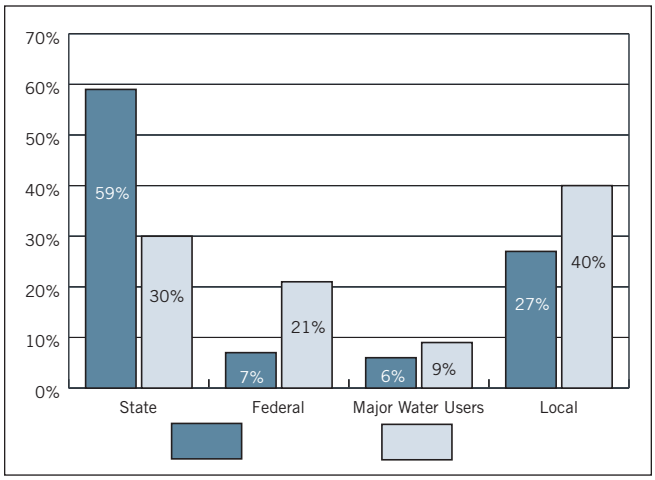
		AVAILABLE FUNDING					ADDITIONAL FUNDING FOR UNMET NEEDS					
Program Element	Funding Target	State	Federal	Water Users	Local Match	Total Avail. Funding	Unmet Needs	State	Federal	Water Users	Local Match	Total Add'l Funding
Ecosystem Restoration	**$1,500**	$150	$3	$200	$19	**$372**	$1,128	$392	$405	$200	$131	**$1,128**
Environmental Water Act.	**$438**	$90	$8	—	—	**$98**	$340	$90	$127	$123	—	**$340**
Water Use Efficiency	**$3,153**	$290	$12	—	$475	**$778**	$2,375	$284	$518	—	$1,573	**$2,375**
Water Transfers	**$6**	$6	—	—	—	**$6**	—	—	—	—	—	**—**
Watershed	**$423**	$47	—	—	$8	**$55**	$368	$149	$161	—	$58	**$368**
Water Quality	**$276**	$24	$1	—	—	**$26**	$250	$57	$71	$17	$105	**$250**
Levees	**$446**	$41	$0.2	—	$7	**$48**	$399	$145	$175	$32	$46	**$399**
Storage	**$1,087**	$63	$2	—	$94	**$159**	$928	$229	$34	$9	$656	**$928**
Conveyance	**$185**	$66	—	$19	—	**$85**	$100	$42	$6	$52	—	**$100**
Science	**$437**	$36	$5	$6	$1	**$48**	$390	$131	$146	$102	$10	**$390**
Oversight & Coordination	**$121**	$72	$2	—	—	**$74**	$47	$3	$44	—	—	**$47**
TOTAL	**$8,073**	**$885**	**$34**	**$225**	**$604**	**$1,748**	**$6,325**	**$1,522**	**$1,688**	**$535**	**$2,580**	**$6,325**

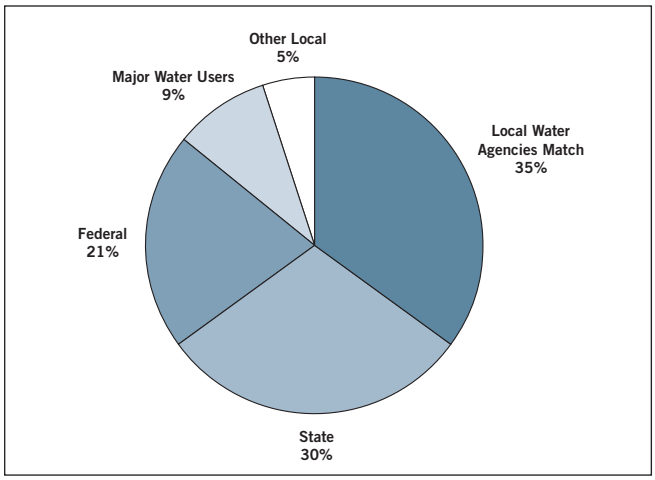
TABLE 3: 10-YEAR FUNDING ALLOCATIONS BY BENEFICIARY ($ in millions)

Program Element	Funding Target	State	Federal	Water Users	Local Match	Total Funding
Ecosystem Restoration	$1,500	$542	$408	$400	$150	$1,500
Environmental Water Account	$438	$180	$135	$123	—	$438
Water Use Efficiency	$3,153	$575	$530	—	$2,048	$3,153
Water Transfers	$6	$6	—	—	—	$6
Watershed	$423	$196	$161	—	$66	$423
Water Quality	$276	$81	$72	$17	$105	$276
Levees	$446	$186	$175	$32	$53	$446
Storage	$1,087	$292	$36	$9	$750	$1,087
Conveyance	$185	$109	$6	$71	—	$185
Science	$437	$167	$151	$108	$11	$437
Oversight & Coordination	$121	$75	$46	—	—	$121
TOTAL	**$8,073**	**$2,408**	**$1,722**	**$760**	**$3,183**	**$8,073**
	100%	**30%**	**21%**	**9%**	**40%**	**100%**

Program. However, for the State share, this is a significant reduction as shown in the bar chart below. The State share of the costs is proposed to fall from roughly 60% between 2000 and 2004 to 30% for the 10-year period from 2005 to 2014. As was noted earlier, this Finance Plan only provides a framework for CALFED finance decision-making. Nothing in this plan binds future funding decisions by either the state or federal governments.

The water users and local governments are seen as important funding partners in the Finance Plan. As shown in the pie chart below, the total local water agency share is actually 44%; a combination of direct allocations (9%) to the major water users such as the CVP and SWP, and the local matching funds that can be attributed to local water agencies (37%). (The water user share of local matching funds is related to the groundwater, conservation, recycling, and desalination grant programs.) Once the program shifts to construction projects, water user contributions are expected to play an even greater role. For example, based on information DWR provided in early 2004, and summarized in the Draft Finance Options Report (pages 118, 130), the water user benefits and possible contributions for construction of a North of Delta Offstream Storage project (if built) could range from $500 million to $1.5 billion. These contributions would significantly increase the water user share in future years.





ADDRESSING THE POTENTIAL FOR FUTURE SHORTFALLS

BDA recognizes that the Finance Plan's proposed funding targets and cost shares assume aggressive funding levels—particularly those from fiscally strapped State and federal governments. And as stated earlier, the funding targets and allocations in this plan are subject to future appropriations and availability of funds. Yet the Authority believes it is crucial at this stage to identify and pursue the cost shares needed to fully meet CALFED objectives. Such an approach has several advantages:

- It makes clear to all affected communities the resources needed to meet program objectives.
- It makes clear to all affected communities exactly which parties are expected to benefit from the proposed actions.
- And it makes clear to all affected communities the importance of working closely with the state and federal governments to secure the necessary funds.

There is a downside to such a strategy. If cost-shares fall short of the proposed allocations, program elements may quickly be underfunded. Some groups may call for certain program elements to be scaled back or to make due without public cost-shares. Others may call on local water suppliers to handle initiatives such as conservation on their own.

Some suggest that the Finance Plan should put forward specific contingencies for covering future funding gaps. BDA acknowledges and is sensitive to such interests. But such an approach, while desirable, is not realistic at this time. There are simply too many unknowns at this juncture to craft credible and specific fallback plans.

Still, the Finance Plan can at least articulate a strategy and process for addressing what are likely to be the inevitable shortfalls. Such a strategy rests on several foundational elements:

1) Annually, BDA in a pubic process and relying on the Finance Plan as a framework, should discuss the next fiscal year funding options for the Program, considering available funding and Program priorities.

2) The Finance Plan needs to be reviewed and, as appropriate, revised on an annual basis as part of CALFED's Program Plan process.

3) All discussions related to Finance Plan revisions need to take place in an open and transparent process that brings the diversity of stakeholder and agency views to the table. Final recommendations need to be considered by the Bay-Delta Authority.

4) The annual assessment needs to take stock of how funding has met or differed from the proposed cost-shares. It needs to further assess the impact of the funding shortfalls on both Element-specific objectives and program-wide progress. Finally, it needs to consider the range of options available to the Program to address the shortfall. These could include:
   - Reducing program targets
   - Finding new funding sources
   - Extending available funding over longer periods

5) Any adjustments to the cost allocations need to be consistent with the Principles outlined elsewhere in this Finance Plan. Most critically, any new cost-shares must continue to adhere to the beneficiary-pays principle, must not blur the line between public and water user cost-shares, and must be mindful of overall Program progress.

Inevitably this is going to require difficult choices; priorities will have to be set and tradeoffs considered. BDA is committed to working with the affected stakeholders and implementing agencies in the years ahead to ensure the Finance Plan stays consistent with the principles and approaches outlined here.

MAJOR ISSUES

BDA staff and consultants have worked closely with agency and stakeholder representatives to identify and address critical issues. Still, there are a handful of key issues that merit upfront discussion.

1) Water User Contributions for ERP, EWA, Levees, and Science. The Finance Plan includes new water user contributions for ERP, EWA, Levees, and Science. The science contribution is associated with the Interagency Ecological Program (IEP). For each program there are water user concerns regarding the appropriate water user share, which water users should contribute, when the contribution should begin, and how the CALFED Program will be held accountable to those funding it. (See Table below for the schedule associated with new water user contributions). BDA is committed to working with stakeholders to address these issues in the next round of finance planning discussions.

2) Likelihood of Increased Federal Share. The CALFED Federal Authorization bill has been signed by the President. Although the bill authorizes additional federal contributions, federal appropriations at these

levels (approximately $150 million per year on average) may be unrealistic. Moreover, as noted earlier, federal cost-shares suggested in this document are only recommendations and any decision on federal funding is to be made by Congress and the President. Implementation of the Finance Plan will require a flexible approach between state and federal funding to pay for costs allocated to the public.

3) Significant Reliance on New State Funds by Year 7 (FY 2006–07). Based on an assessment of state benefits, the Finance Plan relies heavily on new state funds in Year 7 (FY 2006–07). Additional state funds could be from a new State Water Bond voted on in 2006, an increase in General Funds, or other new state funding sources such as a broad-based surcharge or connection fee. In all cases where state funding is needed in Year 6 (FY 2005–06), other funding sources (federal or water user) are relied upon due to the near-term state fiscal crisis.

4) Assurances to Avoid Redirection of Funds. Some stakeholders have expressed concern that any new revenue sources developed for the CALFED Program (e.g. water user fees or new public water surcharges) may be redirected or increased to address shortfalls in other State or federal programs. It will be necessary to develop assurances to eliminate or reduce the possibility of funds being redirected that would deviate from a benefits-based approach.

TABLE 4: SCHEDULE FOR NEW FUNDING

2004–05 / Year 5	• Federal Authorization Signed • Water User Fee for ERP Enacted	• All activities in the CALFED program receive federal authorization • FY 2005–6 Trailer Bill language adopts a water user fee for ERP
2005–06 / Year 6	• Federal Appropriations Increase • CVP Water User contribution for IEP Science	• First increase expected in Federal appropriations for CALFED
2006–07 / Year 7	• New State Funding Needed • Water user contributions for ERP	• New State Funds needed for State share; sources could include new Water Bond, increase in General Fund, or other new state funding sources • New contribution for ERP begin from water users
2007–08 / Year 8	• Water User contributions for EWA and Levees	• New contributions for Levees and EWA expected to begin from water users

PROGRAM ELEMENT EXECUTIVE SUMMARIES

ECOSYSTEM RESTORATION PROGRAM

(Full Program description on page 26)

BACKGROUND

$648 million has been spent on the Ecosystem Restoration Program between 2000 and 2004, with most funding coming from the state and water users. Pre-Record of Decision (ROD) funding totaled $282 million ($190 million federal, $60 million state, $32 million water user).

FINANCE PLAN PROPOSAL

FUNDING TARGET: $1.5 billion over the next 10 years

ALREADY AVAILABLE: $373 million

UNMET NEEDS: Roughly $1.1 billion (shortfall begins in 2005)

FUNDING STRATEGY TO ADDRESS UNMET NEEDS

- State 30%, Federal 30%, Local Grant Match 10%, Water User 30% (includes CVPIA Restoration fund payments of $20 million per year and new water user fee from non-CVP users of $25 million per year)
- In Years 5–9 the State is allocated a larger share because the water user and federal shares do not start until Years 6 and 7 respectively. By Year 10 the funding reflects the above percentages.

RATIONALE

The funding target is consistent with regulatory commitments embodied in the ROD and the Conservation Agreement Regarding Multi-Species Conservation Strategy. Moreover, the ERP views the funding target as the minimum necessary to meet ecosystem restoration and species recovery objectives set forth in the ROD. The cost-share recognizes the significant benefits expected to accrue to the general public (both state and federal) and the water users. The 30% water user allocation recognizes the benefits that Bay-Delta system diverters receive from the ERP as well as the impacts these diversions have on the system.

ISSUES

- Some water users have questioned whether the $150 million per year target is warranted and are in the midst of a review of ERP project expenditures, program targets and water supply benefits. Environmental groups and implementing agencies are concerned that the $150 million may not prove large enough to address ERP objectives.
- Export water users have suggested that any water user fees to fund ERP should be tied to regulatory assurances and that a new fee would represent the maximum financial contribution by participating water agencies for fishery recovery purposes in the Bay-Delta system.
- There is not yet a specific proposal to allocate the 30% water user cost-share. Upstream water users have strong concerns about contributing to the ERP through an annual fee. SWP and CVP contractors believe that the $45 million should be allocated among all resource user beneficiaries; not just on water exported or diverted.
- CVP contractors are concerned that the level of contribution to ERP through the CVP Restoration Fund is disproportionate to program benefits.
- The federal share for ERP is higher than past appropriations. The 50-50 state/federal cost share may shift more to the state if federal appropriations fall short.

ENVIRONMENTAL WATER ACCOUNT

(Full Program description on page 29)

BACKGROUND

Since 2000, the Environmental Water Account (EWA) has been funded entirely with public (state and federal) money. $153 million has come from the state ($54 million General Fund; $99 million bonds) and an additional $17 million has come from federal appropriations. An in-depth evaluation of the EWA is underway to determine appropriate size and composition of a long-term EWA Program. A requirement to fully fund the EWA has been included in the three-year extension of the regulatory commitments embodied in the ROD.

FINANCE PLAN PROPOSAL

FUNDING TARGET: $438 million over the next 10 years

- EWA funding is front-loaded to establish assets and reserves for the program.
- Target includes ongoing science costs to evaluate the program as well as two adaptive management experiments in years 8 and 12.

ALREADY AVAILABLE: $98 million

UNMET NEEDS: $340 million

FUNDING STRATEGY TO ADDRESS UNMET NEEDS

- Near-term funding needs are met with previously authorized public funding (primarily from Proposition 50)
- Annual ongoing costs starting in Year 8 are approximately: 50% State/federal, 25% State Water Project, 25% Central Valley Water Project
- Long-term water acquisitions and the Reserve Fund in Years 5–7: 100% State/federal
- Water user contributions for EWA start in Year 8 assuming the permit decision to allow 8,500 cfs pumping at Banks is made
- Periodic review necessary to assess and potentially adjust program operations and financing

RATIONALE

The funding target is based on estimated acquisition amounts and unit costs. Future program costs will be determined by current and future water acquisition negotiations.

The long-term cost shares of 50% state/federal, 25% SWP and 25% CVP are based on a preliminary assessment of EWA benefits to export water users and the general public. The general public (state and federal) receives ecosystem benefits; export water users receive benefits from avoided water supply impacts due to curtailments in Delta pumping.

ISSUES

- Some environmental groups strongly believe water user contributions should begin in Year 5 or 6 based on benefits currently being received.
- Export water users are critical of the funding targets, which they believe include excessive provisions for science review and administrative costs.
- Some environmental groups oppose the use of the Restoration Fund for the EWA. There are competing demands for the use of the Restoration Fund based on the requirements in the CVPIA. Use of Restoration Fund for EWA could delay other restoration projects.
- The EWA is relying in the near-term on funding from Proposition 50 Chapter 7(d); Water Supply Reliability funds. Some water users are concerned that the share of Chapter 7(d) dollars for EWA is too large and additional funds should be directed to other water supply reliability projects.
- Export water users have indicated they are unwilling to pay for the EWA until new water supply benefits are being received through the permitted operation of the Banks pumping plant at 8500 cfs; and their contribution would be also conditioned on explicit regulatory and financial assurances.
- The federal share for EWA is higher than past appropriations. The 50-50 state/federal split of the public's cost share may shift more to the state if federal appropriations fall short.

WATER USE EFFICIENCY

(Full Program description on page 33)

BACKGROUND

$668 million has been spent from 2000 and 2004; primarily from State and local sources. Recycling spending has been higher than conservation due to the larger local cost shares. In addition to the CALFED funding, there is significant local spending for conservation and recycling not associated with state or federal grants/loans.

FINANCE PLAN PROPOSAL

FUNDING TARGET: $3.2 billion over the next 10 years

By component (per year):

- $33 million for agricultural water conservation
- $50 million for urban water conservation
- $150 million for recycling
- $70 million for desalination (on average)
- $12 million for technical assistance, assurances, science, oversight and coordination

ALREADY AVAILABLE: $778 million (State, Federal, and local match)

UNMET NEEDS: $2.4 billion (shortfall begins in 2005)

FUNDING STRATEGY TO ADDRESS UNMET NEEDS

- Agricultural water conservation: 60% state/federal, 40% local
- Urban water conservation: 40% state/federal, 60% local
- Recycling: 25% state/federal, 75% local
- Desalination:
  Research Projects: 50% state/federal, 50% local
  Full Implementation: 25% state/federal, 75% local
- Other: 100% state/federal

Cost shares for conservation, recycling, and desalination grants shown above are overall program averages. Actual shares by project will vary according to the distribution of benefits.

RATIONALE

Water Conservation. The target and cost-shares are informed by the Year Four Comprehensive Review. The agricultural/urban cost-shares differ due to the higher marginal value of water to urban users, the lower cost to public to achieve flow/timing objectives through agricultural conservation and the expected average distribution of benefits.

Recycling. The target is based primarily on the findings of the Recycling Task Force and discussions with CALFED implementing agencies. The allocation—a change from the existing 45% average state/federal cost-share—reflects an assessment that local benefits are sufficient to cover roughly three-quarters of the cost. State/federal participation could be in the form of either capital grants or subsidized construction loans.

Desalination. The target is based on a DWR assessment of brackish water and ocean desalination potential over next 10 years. The cost share for Full Implementation is consistent with recycling and groundwater allocations and intended to help local project implementers overcome financial and institutional barriers. Larger public cost share for Research reflects the broader scope of public benefit from this activity. The funding target for desalination will be closely reviewed as cost and performance information is made available from early implementation and research investments.

ISSUES

- Some stakeholders are concerned that the funding targets for conservation and recycling grant/loan programs are too low. They argue that these WUE investments provide broad public benefits, reduce surface and groundwater diversions, and help to reduce wastewater discharge, and therefore should be aggressively pursued and given high priority for public funding.
- Some water users believe the funding targets for WUE are too high.
- Some stakeholders are concerned that the public cost share for recycling projects is too low and will undermine the ability of local agencies to implement these projects. They feel strongly that the Finance Plan should maintain the status quo allocation, which is approximately 45% state/federal and 55% local.
- The federal share for conservation and desalination is higher than past appropriations. The 50-50 state/federal cost share may shift more to the state if federal appropriations fall short.

WATERSHEDS

(Full Program description on page 38)

BACKGROUND

Approximately $27 million per year has been spent on the Watershed Program between 2000 and 2004. The state has provided roughly 75% of the funding; the remainder has come from grant matching funds. There is significant local spending apart from CALFED.

FINANCE PLAN PROPOSAL

FUNDING TARGET: $423 million over the next 10 years

- Near-term funding focused on capacity building and assessments; in later years, more funding directed toward implementation.

ALREADY AVAILABLE: $55 million (almost exclusively bonds)

UNMET NEEDS: $368 million

FUNDING STRATEGY TO ADDRESS UNMET NEEDS

- Projects and Local activities: 40% state, 40% federal, 15% project-specific cost share, 5% local government
- Actual cost-shares may vary by project
- Other Program Components: 50% state, 50% federal

RATIONALE

The funding target represents a compromise funding level after extensive discussion among state and federal agencies and within the Watershed Subcommittee.

Watershed projects and local activities. These include competitive grants, directed actions, and local coordinator support. The cost-share arrangement deviates from recent funding patterns by increasing the grant-matching contribution expected from local project sponsors. This cost-share —20% on average—is anticipated to be commensurate with the local benefits received and is based on the Program's experience in the first four years. The state and federal cost-shares are split evenly, as watershed protection and restoration activities are seen as benefiting both state and national public interests.

Other program components. These include technical assistance, partnership seminars, program performance evaluation, science support, and administration. Broad public benefits from these elements justify public funding.

ISSUES

- The Watershed program has received only state funding for the public share over the past four years. The 50-50 state/federal cost share may shift more to the state if federal appropriations fall short.

WATER QUALITY

(Full Program description on page 41)

BACKGROUND

The Water Quality Program has spent nearly $80 million between 2000 and 2004, with most of the funding provided by the state.

FINANCE PLAN PROPOSAL

FUNDING TARGET: $276 million over the next 10 years

- Implementation for the San Joaquin River Water Quality Management Program is still under review, currently the target is estimated to be $288 million. Discussions will continue and funding targets and allocation will be proposed in the next year. An additional $320 million for four construction projects may be needed if projects proceed to construction.

By Component (per year):

- Regional water quality management plans ($12.6 million)
- Source improvement ($207 million: $2 million for directed actions, $41 million for Conveyance projects that yield source improvement, and $164 million for augmenting non-point source programs)
- Treatment ($34 million)
- Science, monitoring, and assessment ($15.6 million)
- Program management and oversight ($7 million)

ALREADY AVAILABLE: $28 million with additional funding from Proposition 50 grants possible

UNMET NEEDS: $248 million (shortfall begins in 2005)

FUNDING STRATEGY TO ADDRESS UNMET NEEDS

- Regional water quality management plans: 25% state, 25% federal, 50% local
- Source improvements:
  - Franks Tract project feasibility study: 80% public, 20% SWP water users
  - Franks Tract Phase I construction: 25% public, 25% CVP water users, 50% SWP water users
  - Source improvement grants: 25% state, 25% federal, 50% local
- Treatment technology: 25% state, 25% federal, 50% local
- Science, monitoring and assessment and program management and oversight: 53% state; 47% federal

RATIONALE

Regional Water Quality Management Plans. The funding target is based on $2 million per plan for six plans. The public share of funding is based on the need to help local entities overcome financial and institutional barriers to regional planning and to influence the direction of the regional plans to meet CALFED objectives. Regional Planning is a critical element of the program. The program priorities and finance plan will be revised to implement these plans as soon as funding can be made available.

Source Improvement—Franks Tract. The funding target is based primarily on agency and stakeholder estimates of project planning and construction costs for Franks Tract. The cost shares for construction reflect expected export water quality benefits of the project.

Source Improvement Grants. The funding target for grants includes a small program in the first three years and then an expansion after the regional plans are completed. The annual target will be reevaluated after information from the regional plans is available. A public share is based on the public benefits expected from the water quality projects and lack of local cost effectiveness to fully fund the projects.

Treatment Technology Demonstration. The funding target is based on the estimated level of demonstration projects that will be needed and the average cost of each. The public share is based the broad public benefits associated with research projects.

ISSUES

- Lack of public funding for the regional plans is a major stakeholder concern.
- The federal share for grants and treatment technology directed at CALFED actions is higher than past appropriations. The 50-50 state/federal cost share may shift more to the state if federal appropriations fall short.

LEVEES

(Full Program description on page 49)

BACKGROUND

The Levees Program consists of two main components—Delta Levees and Suisun Marsh Levees. The Delta Levees component has spent approximately $84 million between 2000 and 2004—primarily from state funding. In addition, significant contributions have been made since 1972 through DWR's Delta Levees subventions and special projects programs.

The Suisun Marsh Levees component has spent approximately $6 million between 2000–2004 from public and private landowners. Additional information for the Suisun Marsh component is expected from the Suisun Marsh Plan (Plan). Prior to completion of the Plan in Year 7, maintenance of existing levees will be locally and State funded. Upon completion of the Suisun Marsh Plan, the Suisun Marsh Levees funding targets and allocations will be reevaluated. A benefits-based cost allocation evaluation will be completed by June 2005 which will propose cost allocations for the Suisun Marsh levees.

FINANCE PLAN PROPOSAL

DELTA LEVEES FUNDING TARGET: $446 million over the next 10 years ($50 million per year beginning in Year 8)

By components (per year):

- $17 million for levee maintenance (subventions)
- $30 million for levee improvements (special projects & P.L. 84-99)
- $3 million for all other components (oversight and coordination, subsidence control plan, emergency response, risk study, and beneficial reuse of dredge material)
- $6 million total in Years 5–7 for a Comprehensive Program Evaluation

ALREADY AVAILABLE: $48 million (primarily Proposition 50)

UNMET NEEDS: $399 million; shortfall begins in 2006.

FUNDING STRATEGY TO ADDRESS UNMET NEEDS

There will be a near-term emphasis through Year 7 to maintain current funding levels and priorities while a Comprehensive Program Evaluation (CPE) for the levees program is underway. The CPE will review program benefits, funding needs, and priorities for the program. Until the CPE is complete, the Finance Plan includes the following example allocation as a placeholder.

- Levee maintenance: 75% state, 25% local
- Levee improvements: 65% federal, 15% state, 15% water users (export/in-Delta), 5% local
- Comprehensive Program Evaluation: 100% state
- All other components: 100% public (state and federal)

RATIONALE

Delta Levee Maintenance. The funding target (from DWR and local reclamation districts) is based on annual needs. Cost shares continue the status quo (up to 75% state, 0% federal, and 25% local).

Delta Levee Improvements. The funding target follows the status quo funding in the interim for state funding, but federal funding from a new federal authorization increases the total. Benefits of this component include export and in-Delta water quality and water supply reliability, ecosystem restoration, and flood protection. Until the CPE is complete an allocation is not proposed, but a placeholder cost share is included which adopts the traditional federal cost share for flood protection projects (65%), and funds the remaining balance from the state (15%), locals (5%), and water users (15%).

Comprehensive Program Evaluation. The funding target is based on DWR preliminary estimates to complete the evaluation, including the risk study that is currently underway. Because there are broad benefits from the CPE and specific benefits and beneficiaries from actions that may stem from the CPE have yet to be identified, the allocation is 100% public.

All Other Components. The funding target is based on staff estimates for program management and research. Since this component provides broad public benefits, the allocation is 100% public, split between state and federal funding.

ISSUES

- Recently enacted federal legislation provides new authorization for the USACE to participate in the levee program. Some stakeholders have expressed concern that the USACE process and schedule will cause delays and increase costs.
- Certain stakeholders are concerned that the Suisun Marsh levees are not more fully included in the Finance Plan regarding 10 year funding targets and allocations.

STORAGE

(Full Program description on page 56)

BACKGROUND

A total of $365 million has been spent on the program between 2000 and 2004: $61 million on surface storage investigations, $290 million on the groundwater storage program, and $13.6 million on the San Luis Reservoir Low Point Improvement Project. Spending to-date has been a mix of state and federal funds for surface storage; for groundwater, funding has relied on state bonds and extensive local matching funds.

FINANCE PLAN PROPOSAL

FUNDING TARGET: Surface Storage Planning $87 million, Groundwater $1 billion over the next 10 years

- Bulk of surface storage planning funding needed within next three years.
- Only surface storage planning costs discussed; funding target does not include potential capital costs for surface storage which will be allocated according to project beneficiaries.
- San Luis Low Point Improvement Project included in targets for Storage.

ALREADY AVAILABLE: $159 million ($125 million for groundwater, $34 million for surface)

UNMET NEEDS: $928 million ($875 million for groundwater, $53 million for surface)

FUNDING STRATEGY TO ADDRESS UNMET NEEDS

- For surface storage studies ($82 million): 100% public funds (roughly 50% state, 50% federal, but varies by project) proposed due to near-term funding needs; water user contributions may be sought if public funding not sufficient or timely. CVP water users are investigating their willingness and ability to participate in San Luis Low Point Improvement study; the proposed allocation is split between federal taxpayers and CVP water users.
- For groundwater ($875 million): 25% state, 75% local match (on average); cost-share varies by project based on local cost-effectiveness and public benefits.

RATIONALE

Surface Storage Planning. The funding targets are based on projections to complete ongoing surface storage investigations. State/federal funding for planning studies is appropriate where the individual beneficiaries have not been identified. State/federal allocation for individual project studies is based on lead planning responsibility, as reflected in project spending to date. If projects move to construction, some or all planning costs would be recovered from project beneficiaries, and future construction would be paid for by project beneficiaries, likely through revenue bonds.

Groundwater Storage. The funding targets are based on the ROD target for groundwater storage and the estimated cost per acre-foot for the additional 500,000 acre-feet still needed to reach the target. Average cost shares are based on the expected distribution of local and statewide benefits; shares for individual projects could vary. The public cost share for groundwater storage projects is consistent with recycling and desalination allocations and intended to help local project sponsors overcome financial and institutional barriers to implementation.

ISSUES

- Water user participation in the San Luis Low Point feasibility study is not assured. Lack of participation by water users would likely delay completion of the study.
- A delay in surface storage planning is expected if additional funding is not provided in the near-term. Approximately $30 million in existing state bond funds are remaining.
- Current federal authorization and funding for groundwater grant programs is limited. Public cost for this component of the storage program is likely to be borne largely by the state.

CONVEYANCE

(Full Program description on page 62)

BACKGROUND

The Conveyance Program has spent approximately $110 million between 2000 and 2004, with the state and State Water Project (SWP) paying the majority of the costs. The Conveyance Program is developing 10 possible projects over the next 10 years—three construction projects and seven planning studies.

FINANCE PLAN PROPOSAL

FUNDING TARGET: $185 million over the next 10 years

ALREADY AVAILABLE: $86 million

UNMET NEEDS: $100 million

FUNDING STRATEGY TO ADDRESS UNMET NEEDS

By component (construction):

- Permanent Operable Barriers/8500 ($100 million): For planning 100% SWP; for construction use available state bonds (Proposition 13) and federal appropriations specifically dedicated for this purpose, with any remaining unmet needs paid by eligible Proposition 50 funds.
- Interim South Delta Actions ($25 million): Costs allocated to SWP water users.
- Delta Mendota Canal/ SWP Aqueduct Intertie ($27 million): Remaining costs allocated to South of Delta Central Valley Project (CVP) water users.

By component (planning studies only):

- South Delta Fish Protection Measures ($7.2 million): Cost shares split between a mixture of public (state and federal) and water user (SWP) funding.
- Tracy Fish Test Facility: No funding is proposed, pending a decision from the South Delta Fish Facilities Forum on this project.
- Lower San Joaquin River Flood Control & Ecosystem Improvements ($11.6 million): 100% public (50% state/ 50% federal).
- Delta Cross-Channel Re-Operation ($1.8 million): $1.1 million is available from Proposition 13 and SWP funding. Remaining costs ($700,000) to CVP contractors.
- Through Delta Facility ($5.7 million): $5.7 million is available for current research. No additional funding is included until current evaluations are complete.
- North Delta Flood Control & Ecosystem Restoration Project ($500,000): $500,000 is available from the General Fund. No additional funding is included until current studies are complete.
- Clifton Court Forebay/Tracy Pumping Plant Intertie ($2 million): 100% export water users (SWP and CVP).

Overall allocation for all 10 projects: 59% state, 3% federal, 23% SWP, 15% CVP.

RATIONALE

The funding targets are derived from cost estimates prepared by CALFED implementing agencies to complete the seven planning studies and three construction projects, plus oversight, coordination, and science. When the planning studies are completed, a finance and allocation plan will be developed for each of the remaining construction projects.

Allocation of costs for construction of the Permanent Operable Barriers/8500 relies on previously authorized public funding for this project. The costs for the other two construction projects are allocated to the water users they primarily benefit. Allocation of planning study costs relies on a mixture of public and water user funding, some of which has been previously authorized for these purposes. The remaining balances were distributed in proportion to expected benefits.

There is broad stakeholder/agency support for the funding targets and finance strategy.

ISSUES

None.

SCIENCE

(Full Program description on page 67)

BACKGROUND

The Science Program has two primary components: BDA (BDA) Science Program and the Interagency Ecological Program (IEP). BDA has averaged $10 million per year, nearly all of which is state funded. IEP has averaged $12 million per year, most of which is State Water Project (SWP) water user and federal funds.

FINANCE PLAN PROPOSAL

FUNDING TARGET: $437 million over next 10 years ($300 million for BDA, $137 million for IEP)

ALREADY AVAILABLE: $36 million for BDA, $12 million for IEP

UNMET NEEDS: $264 million for BDA, $126 million for IEP

FUNDING STRATEGY TO ADDRESS UNMET NEEDS

- For BDA Science: 100% public (50% State, 50% federal)
- For IEP: 44% SWP water users, 37% Central Valley Project (CVP) water user, 8% federal, 3% State, 1% local, and 7% recreational user

RATIONALE

BDA Science. The proposed funding target is based on cost estimates prepared by the Science Program to (1) provide more robust scientific information to enhance real-time management of water and resources; (2) evaluate the effectiveness of CALFED strategies and actions; (3) conduct ongoing independent reviews of the scientific basis of programs and projects; (4) turn existing monitoring data into information by increasing investments in data analysis and synthesis; and (5) to share scientific information with the public, decision makers, and the broader scientific community on system status and changes. State and federal cost-share are split evenly, as BDA Science activities are seen as benefiting both state and national public interests. The federal share for BDA Science is higher than past appropriations. The 50-50 State/federal cost share may shift more to the State given past appropriations levels.

IEP. IEP science activities are strongly tied to monitoring and water operations in the Delta. The monitoring and special studies IEP conducts primarily benefit the export water users. As such, IEP should follow a beneficiary pays principle with water users funding the majority of IEP costs. The allocation shifts the federal taxpayer share to the CVP water user to be consistent with the state approach of relying on the SWP water users to fund 42% of the Program.

ISSUES

- CVP water users are not in agreement regarding the increased allocation of costs to CVP water users for the IEP.

OVERSIGHT AND COORDINATION

(Full Program description on page 71)

BACKGROUND

Oversight and Coordination (O&C) activities related to the CALFED Bay-Delta Program—including activities such as planning and tracking, regional coordination, public involvement and outreach, executive and staff management, and environmental justice (EJ)—has averaged $11 million per year. In the first four years of the program, the State has covered 89% of the cost. The federal government has funded the remainder.

FINANCE PLAN PROPOSAL

FUNDING TARGET: $121 million over the next 10 years

ALREADY AVAILABLE: $73.8 million (primarily General Fund)

UNMET NEEDS: $48 million (shortfall begins in 2005)

FUNDING STRATEGY TO ADDRESS UNMET NEEDS

- 100% public (60% State; 40% federal)

RATIONALE

BDA oversees and helps coordinate the activities of the 24 state and federal agencies working cooperatively through the CALFED Program. As an essential part of implementation, oversight and coordination is a vital component of the CALFED process, providing a forum for discussion, public accountability and assisting in Program integration.

The funding target is tied to projected costs for program activities. Full public funding is considered appropriate due to the broad benefits provided by the O&C program element. The distribution of costs between the State and federal governments is based on limitations currently set in federal authorizing legislation.

ISSUES

- There is general stakeholder/agency support for the funding target and strategy.
- The finance strategy is heavily dependent on future State and federal appropriations.
- The EJ community is concerned about the level of funding proposed for EJ.

PROGRAM ELEMENT FINANCE PLANS

ECOSYSTEM RESTORATION PROGRAM

BACKGROUND AND FUNDING HISTORY

Between 2000 and 2004, funding for the Ecosystem Restoration Program (ERP) has totaled $648 million ($452 million state, $22 million federal, $101 million from water users, and $73 million estimated local grant matching). In addition, contributions were made before the ROD as part of the Delta Accord and Category III funding that totaled $282 million ($60 million state, $190 million federal and $32 million water users funding).

As of December 2003, ERP had funded approximately 400 ecosystem restoration projects. The graph below shows the share of ERP expenditures by project type.[3]

As part of assuring programmatic compliance for the CALFED Program with the Federal Endangered Species Act (FESA), California Endangered Species Act (CESA), and California Natural Community Conservation Planning Act (NCCPA), the ERP Implementing Agencies agreed on a common list of 119 milestones that, if achieved, would constitute adequate implementation of the ERP, Water Quality Program, and Multi-Species Conservation Strategy (MSCS) through Stage 1 (first 7 years of the CALFED Program). Midway through Stage 1 a progress assessment has determined that of the 119 milestones, 79% are on or ahead of schedule for completion, and 13% are behind schedule. Another 8%, all having to do with water quality improvements, are still under evaluation because they dealt with complex and evolving issues that will require long-term solutions.[4]

3. California Bay-Delta Authority, Ecosystem Restoration Program data, figure generated for this report. Note that percentages add to more than 100% because some investments were multi-purpose.

4. CALFED Bay-Delta Program, Reinitiation of Consultation: Assessing Progress Towards Milestones and the Efficacy of the Environmental Water Account, July 2004, including the Response to Input letter and attachment from the California Department of Fish and Game dated September 15, 2004.

FINANCE PLAN

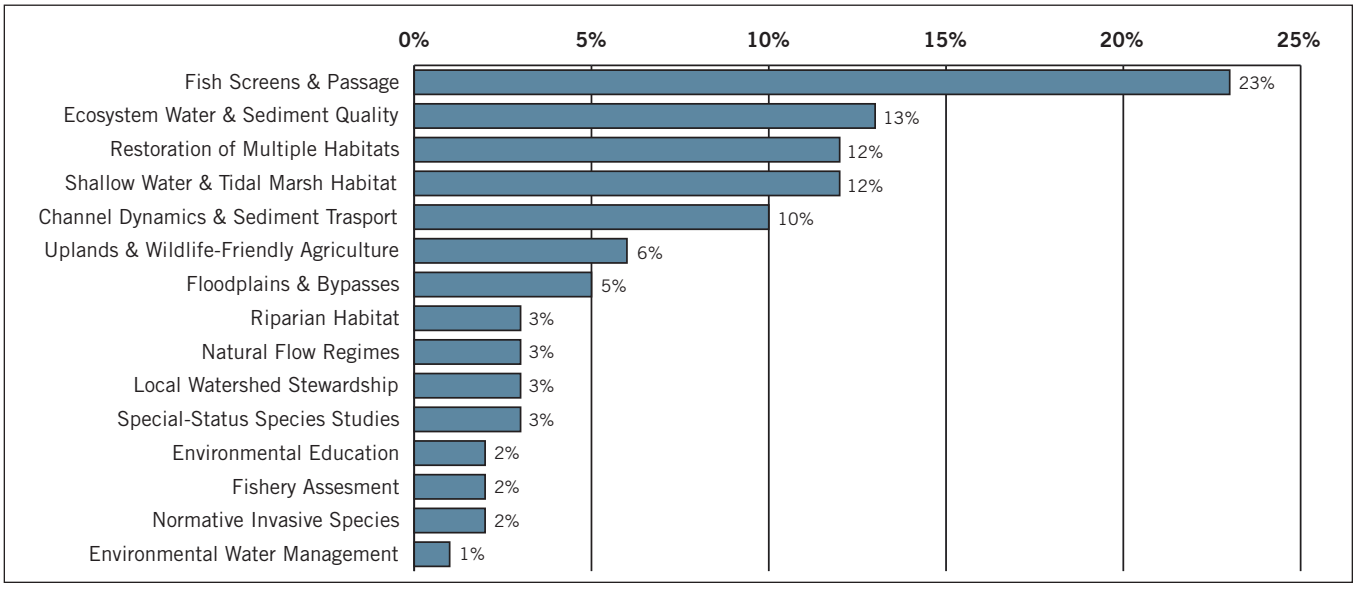
FUNDING TARGET

The funding target for ERP over the 10-year planning period is $1.5 billion, or, on average, $150 million per year. A more detailed Budget Justification for ERP is included in the Appendix. The ERP target is based on the following considerations:

- The Record of Decision (ROD) calls for ERP expenditures of not less than $150 million/year through Stage 1. This funding level for ERP is incorporated into the regulatory commitments embodied in the ROD and the Conservation Agreement Regarding Multi-Species Conservation Strategy (Conservation Agreement) signed in 2000, and amended in 2004.

- The Conservation Agreement as amended includes program-level regulatory commitments for exports through the end of Stage 1, provided that certain conditions are met, including at least $150 million/year for the ERP. It is important to note, however, that the Conservation Agreement also includes the ability to review this requirement through a process if funding is not sufficient to meet this target.

ERP EXPENDITURE BY PROJECT TYPE THROUGH DECEMBER 2003



- ERP actions over the next 10 years will focus on meeting ERP/MSCS milestones and on additional actions that contribute to recovery of MSCS species, especially for those species for which the CALFED Program is responsible for recovery.[5]

- CALFED agencies view the funding target as the minimum necessary to meet ecosystem restoration and species recovery objectives set forth in the ROD.

AVAILABLE FUNDING

ERP has available approximately $372 million in existing sources of funding over the next 10 years—about 25% of the 10-year funding target. CVPIA Restoration Fund contributions, which have averaged about $20 million/year between 2000-2004, account for the largest share of existing ERP funding. State bond funds and General Fund appropriations constitute the second significant source of available funding. Existing ERP funding through 2014 is shown in the following table.

Given existing funding sources, an additional $1.1 billion for the period 2005–2014 will need to be generated through a combination of state, federal, water user, and local funding sources.

FUNDING STRATEGY

Costs for ERP over the next 10 years will be split between (1) the state government, (2) the federal government, (3) water users, and (4) local agencies and organizations (through ERP grant matches). The allocation of ERP costs between these funding sources is as follows: State 30%, Federal 30%, Water users 30%, Local 10%.

In Years 5–9 the State is allocated a larger share of the costs because the water user and federal shares do not start until Years 6 and Year 7 respectively. By Year 10 the funding reflects the above percentages. The allocation is based on the following considerations:

- The allocation is broadly consistent with the ERP cost allocation proposed in the ROD and the proportional benefits-based allocation presented in the Draft Finance Options Report (FOR).

- The allocation accounts for the potentially large public benefits generated by ERP investments by assigning more than half of all ERP costs (60%) to state and federal taxpayers.

- The allocation recognizes both the benefits ERP can provide to water users as well as the costs development of water resources for human uses imposes on public trust resources by assigning a significant cost share (30%) to water users deriving supply from the Delta and its tributaries.

- The allocation treats potential benefits to recreational and commercial fishing, hydropower, and flood protection as incidental benefits and does not assign cost shares to these groups.[6]

- The 10% share allocated to local agencies and organizations is based on average grant matching levels for the period 2001–2003.

Cost shares based on the funding target and allocations are shown in the following table. The reader should note that ERP costs paid by each funding source in the table may deviate from the shares cited above because of issues tied to expenditure of already available funds, timing of federal and state appropriations, and implementation of a water user fee. With respect to these timing issues, the following assumptions have been made:

- New federal appropriations for ERP will be available no sooner than Year 6 and are limited to 30% of the annual funding target.

- The earliest that revenue from a water user fee could be received is Year 7. The combined annual revenue from CVP RF payments and this fee are limited to 30% of the annual funding target.

- The earliest additional State appropriations would be available to fund its share of ERP is Year 7.

- Funding shortfalls in Years 5 and 6 are made up with state funding in Years 7–9 so that the 10-year target is achieved.

These funding constraints cause the allocation on the 10-year period to deviate somewhat from the allocation proposed above (i.e. 30% state, 30% federal, 30% water user, and 10% local), especially in the first five years. This is shown in the table that follows.

5. Appendix A: Ecosystem Restoration Program, provides a more detailed discussion of expected ERP priority actions and spending over the next 10 years.

6. Some water users have suggested that flood protection and hydropower benefits for some ERP projects could be large enough to include these beneficiary groups in repayment plans for those projects. This would have to be done on a case-by-case basis, however, rather than as part of the general Finance Plan for ERP. It is also important to note that CVP hydropower users contribute to the CVP Restoration Fund and therefore are in fact be part of the proposed ERP cost allocation.

ALLOCATION BY PERCENT

	YEARS 5–9	YEARS 10–14	TOTAL 5–14
State	42%	30%	36%
Federal	24%	30%	27%
Water Users			
SWP & Others	10%	17%	13%
CVP (via CVPIA RF)	13%	13%	13%
Local	10%	10%	10%

PERIODIC REVIEW

Periodic reevaluation of funding targets and spending priorities will be made. Ongoing evaluation of Program performance and benefits will part of the ERP of program targets and milestone accomplishments and will be reported periodically as part of the Program plans. This process is important especially given stakeholders' divergent views on funding levels and actions necessary to meet program objectives. This information can also be used to identify and quantify benefits and to reevaluate appropriate cost shares among the beneficiaries.

ISSUES

Funding Target. There is broad agreement among CALFED agencies and environmental interests that funding for ERP should not dip below $150 million/year. Representatives of some environmental interest groups have expressed concern that this level of funding may turn out to be insufficient for ERP to meet its ecosystem restoration and species recovery objectives by 2030. Among water user representatives there is no consensus around a $150 million/year target for ERP.

Funding shares among water users. The ERP finance proposal assigns 30% of overall ERP costs to water users, or $45 million/year. CVP Restoration Fund payments account for approximately 50% of the water user ERP payment. The proposed division of the remaining 50% of water user costs between SWP contractors and non-CVP water users is still under evaluation. The development of any new fee would be based on the expected benefits that a water user would receive from the ERP. The magnitude of the fee, how it would be applied and to whom will require thorough discussion with all parties. This issue requires more analysis and discussions among stakeholders.

CVP cost share. CVP contractors are concerned that the level of contribution to ERP through the CVP Restoration Fund is disproportionate to program benefits. The level of contribution is based on the amount of CVP Restoration Fund spending that has historically contributed to meeting Ecosystem Restoration Program objectives. This has roughly averaged $20 million per year. Because the CVP Restoration Fund is a pre-existing funding source, the Finance Plan does not reallocate this funding to other purposes. In this way, CVP Restoration Fund contributions are treated analogously to pre-existing bond funds authorized for specific project purposes, per the Finance Plan principles.

Linkage to regulatory assurances. Export water users have indicated that their support for any new water user funding for ERP needs to be linked to regulatory assurances for participating water agencies, including: 10-year water supply reliability assurances; no additional water losses to ESA purposes; and agreement that the ERP-related fee will represent the maximum financial contribution by participating water agencies for fishery recovery purposes in the Bay-Delta system, including all those under ESA, FERC and other regulatory processes.

Ecosystem Restoration Program — Allocation by Dollars ($ in millions)

Program Year	Funding Targets	Available Funding								Additional Funding for Unmet Needs					
		State				Federal	Water Users	Local Match	Total Available Funding	Unmet Needs	State	Federal	New Fee	Local Match	Total Additional Funding
		General Fund	Prop 204	Prop 13	Prop 50		CVPIA-RF						Non-CVP Water Users		
Year 5	$150.0	$0.9	$1.6	$10.0	$81.2	$3.2	$20.0	$12.6	$129.6	$20.4					$0.0
Year 6	$150.0	$0.9		$10.0	$15.2		$20.0	$3.4	$49.6	$100.4		$45.0		$5.9	$50.9
Year 7	$150.0	$0.9		$10.0			$20.0	$1.4	$32.4	$117.6	$57.3	$45.0	$25.0	$16.6	$143.8
Year 8	$150.0	$0.9		$10.0			$20.0	$1.4	$32.4	$117.6	$57.3	$45.0	$25.0	$16.6	$143.8
Year 9	$150.0	$0.9		$2.4			$20.0	$0.4	$23.8	$126.2	$57.2	$45.0	$25.0	$16.6	$143.8
Year 10	$150.0	$0.9					$20.0		$20.9	$129.1	$44.1	$45.0	$25.0	$15.0	$129.1
Year 11	$150.0	$0.9					$20.0		$20.9	$129.1	$44.1	$45.0	$25.0	$15.0	$129.1
Year 12	$150.0	$0.9					$20.0		$20.9	$129.1	$44.1	$45.0	$25.0	$15.0	$129.1
Year 13	$150.0	$0.9					$20.0		$20.9	$129.1	$44.1	$45.0	$25.0	$15.0	$129.1
Year 14	$150.0	$0.9					$20.0		$20.9	$129.1	$44.1	$45.0	$25.0	$15.0	$129.1
TOTAL	$1,500.0	$9.4	$1.6	$42.5	$96.4	$3.2	$200.0	$19.3	$372.4	$1,127.6	$391.9	$405.0	$200.0	$130.7	$1,127.6

1. State, fed, and water users, local shares can vary in each year due to mismatch between available funds, fed appropriations, timing of user fee.

2. $150 target not met in Year 5 and exceeded in Year 6 due to allocation of Prop 50 funds between these two years.

3. Total ERP funding over 10 years is 100% of funding target.

ENVIRONMENTAL WATER ACCOUNT

BACKGROUND AND FUNDING HISTORY

Since 2000, funding for a pilot Environmental Water Account (EWA) has been provided entirely with public funds. $153 million in State funding has come from General Fund appropriations ($54 million) and bond funding (about $99 million). Federal appropriations provided $17 million over the same period. The ROD states that the pilot program should be reviewed after four years to "assess the success of EWA operations" and to "determine the appropriate size and composition of an EWA, as well as the EWA's sharing in the benefits from new facilities." A Science Program review panel has been formed to review EWA operations and results. At the time of the four-year evaluation of the EWA, the issue of future funding is being revisited. In addition, an operational EWA has been required as a prerequisite of the annual program-level regulatory commitments for Delta export area water supply provided in the ROD through Sept 30, 2004.

FINANCE PLAN

The EWA has operated for the past four years as a pilot program. A set of discussions and processes are currently underway to determine the structure of the EWA for the next 10 years. These processes include:

- the Finance Planning effort;
- a science review to assess program performance and future needs;
- modeling and cost estimation to refine planning targets for the program;
- on-going negotiations to acquire assets for the program.

EWA implementing agencies have developed estimates of water acquisition targets for a long-term EWA. The latest available modeling analysis (which assumed Banks pumping at 8500 cfs) resulted in the following annual purchase targets:

- 210 TAF critical years
- 230 TAF dry years
- 250 TAF below normal, above normal, and wet years

These targets are estimated for delivery south of Delta—additional water is often required for conveyance losses and Delta carriage water. Over the 10-year planning period, the targets for delivering purchased water south of the Delta are shown as expected annual amounts. Actual amounts may vary substantially from year to year based on hydrologic and fish population conditions. Multi-year acquisitions agreements, including options agreements, will be pursued as one way to manage uncertainty. Water acquired is available to fishery management agencies to use to protect and restore fish populations in the Bay-Delta system and increase water supply reliability for export water users.

FUNDING TARGET

The funding target for EWA over the 10-year planning period is $438 million. Annual costs are higher in earlier years and level off to approximately $35 million starting in Year 10. Funding targets were developed based on estimated acquisition amounts and unit costs. Prior to increased pumping capacity at Banks Pumping Plant, the funding targets are assumed to be similar to acquisitions over the first four years of EWA operation. Costs have been updated to reflect more recent estimates of water costs and other program costs. Costs are projected in real dollars, without inflation. Previous estimates were indexed up to 2005 dollars and unit costs reflect more current experience with water purchases.

Unit costs to acquire EWA water are assumed to decline if and when Delta pumping increases to 8500 cfs and EWA can shift more purchases to less-costly upstream sources—for the Finance Plan, the change is assumed to occur in Year 8. Actual program costs will largely be determined by current and future water acquisition negotiations. For example, long-term agreements may reduce total costs to some extent.

Reserve Fund. DWR has proposed a Reserve Fund to support a Wet-Dry Year Exchange and to accommodate the fluctuations and uncertainties of water acquisitions and needs. The total Reserve Fund starts at $16 million, and would be operated as a revolving fund. In years when hydrologic and fish population conditions warrant greater acquisition than the annual planned revenue, the Reserve Fund would provide the additional funds. Annual revenue sources would rebuild the fund in years of lower than average acquisition costs. At the end of the 10-year plan a significant amount of money is likely to remain in the fund, and would be available, for example, to carry forward into a continuing operation of EWA. Alternatively, if the EWA program were to end, the fund could be used to finance the final year of operations.

Long-term Purchase Agreements. An implementing statute for Proposition 50 (Chapter 7, Section 79555a) states that a minimum proportion of Proposition 50 money spent for EWA water acquisitions applies to long-term purchases, beginning in the 2004–2005 fiscal year. The EWA is currently pursuing and negotiating such agreements. No significant long-term agreements have been concluded as yet, but negotiations are underway and other opportunities are being pur-

sued. For purposes of this plan, $50 million is assumed to be spent on long-term asset acquisition agreements in Years 6 and 7. As a result, funding targets are high in these years, but lower in later years. If additional long-term agreements are made, the annual pattern of funding targets and funding needs will be adjusted, so that money expended in early years for long-term acquisition would be offset by reduced expected annual costs in subsequent years. Correspondingly, if fewer long-term acquisitions are made, near-term costs will be lower and future, annual acquisition costs higher.

Science. Funding to support the EWA Science component includes ongoing costs estimated at $4.5 million per year, to support targeted research, monitoring, and expert review. Additional adaptive management experiments would provide additional water in years 8 and 12 to test hypotheses about system and species responses, at an estimated acquisition cost of $4 million per experiment.

Funding targets for EWA components are summarized in the table below.

AVAILABLE FUNDING

Available funds include:

- Federal public share: $8 million Year 5
- State public share: $7.6 million is available from Proposition 204, assumed to be spent in Year 5. $82.3 million is available from Proposition 50. Spending is assumed to spread across Years 5-7 as needed to best match funding needs

These sources leave an unmet funding need of $340 million over the 10-year period.

FUNDING STRATEGY

Costs for the EWA over the next 10 years are to be split between the state government, the federal government and water users. The allocation varies over the 10-year period, but can be summarized as follows:

- Long-term allocation, beginning in 2010: 50% state/federal, 50% water users[7]
- Over the full 10-year period: 41% state, 31% federal, 28% water users

The primary beneficiaries of the EWA include the general public (state and federal) due to the ecosystem benefits; and the Delta export water users due to the avoided water supply impacts due to curtailments in Delta pumping. All other water users may receive some benefits associated with the EWA because of the reduced likelihood of future ESA listing and regulatory restrictions. There is no quantitative basis at this time upon which to allocate costs to this broader group of water users. Because the program has two program objectives and because data on which to quantify the benefits are limited—the CALFED agencies support a long-term 50-50 cost allocation between public funding and Delta export water user funding.

The ROD set the initiation of a long-term EWA concurrent with the implementation of Delta improvements, notably the increase in Banks pumping to 8500 cfs. The lifting of permits to allow increased pumping is expected to occur in Year 8. Although water users have received benefits from the EWA and are expected to continue to receive benefits, the Finance Plan supports continued public financing of the Program prior to Year 8 based on the linkage with Delta improvements. In Year 8 and later, significantly more of the funding would come from water users.

7. The actual water user share shown in the allocation table is slightly less than 50% because of the assumed public funding of the water purchase for an adaptive management experiment shown occurring in Year 12.

10-Year Funding Targets for EWA Components (2005 $ in millions)

Program Years	Annual Asset Purchases	Long-Term Asset Purchases	Admin, EIR/EIS, Energy, Conveyance	Reserve Fund	Science and Monitoring	Total
Year 5	$32.3		$6.5		$4.5	**$43.3**
Year 6	$28.4	$35.0	$4.2		$4.5	**$72.1**
Year 7	$28.4	$15.0	$4.2		$4.5	**$52.1**
Year 8	$26.5		$4.2	$8.0	$8.5	**$47.2**
Year 9	$26.5		$4.2	$8.0	$4.5	**$43.2**
Year 10	$26.5		$4.2		$4.5	**$35.2**
Year 11	$26.5		$4.2		$4.5	**$35.2**
Year 12	$26.5		$4.2		$8.5	**$39.2**
Year 13	$26.5		$4.2		$4.5	**$35.2**
Year 14	$26.5		$4.2		$4.5	**$35.2**
10-Year Total	**$274.4**	**$50.0**	**$44.5**	**$16.0**	**$53.0**	**$437.9**

The CALFED federal authorization bill authorizes spending on the EWA: up to $90 million over a five-year period (through Year 10) for the federal public share of EWA costs, and up to $10 million per year from the CVPIA Restoration Fund for any CVP water user share of EWA costs. The CVP Restoration Fund share is scheduled to begin when SWP water user funding begins, in Year 8.

The water supply benefits of EWA were described in detail in the Draft Finance Options Report and were used to motivate the 50-50 cost allocation between water users and the public. The water user benefit was an avoided loss of water supply that would likely have resulted from Delta pumping curtailments in the absence of EWA. Although these benefits accrue to the Delta export areas, the Restoration Fund revenues to be used to pay the CVP's share of costs are collected from contractors in all regions served by the CVP. This Finance Plan should not be construed to assign benefits or payment responsibility to users or regions other than the Delta export contractors.

Key assumptions and principles used to derive the funding allocation are:

- The level of funding authorized for the federal share in years 6–10 (up to $90 million) and from the CVPIA Restoration Fund (up to $10 million per year) are used as upper limits.

- SWP user funding begins in Year 8 and should be at least equal to the CVP user share. The Draft Finance Options Report had included a cost split of 80% SWP and 20% CVP based on the initial years of EWA operation. Water management actions during the last two years have been more evenly split between the state and federal facilities. Therefore, the proposed cost split is 50% SWP and 50% CVP. Both the Draft Finance Options Report and this 10-year Plan recommend that the actual CVP/SWP split should be based on periodic evaluations of how EWA water was actually used and which project benefited. Rules need to be developed for adjusting the water users' shares according to the evaluation.[8]

- From Years 10–14, the overall state/federal/water user shares are approximately 25%/25%/50%. This reflects the Equal Cost-Share allocation developed in the Draft Finance Options Report. The overall cost allocation for the 10-year plan does not meet this long-term allocation, primarily because of the delay in water user contribution until Year 8.

- The science component is a fundamental part of the EWA. The cost of the two science experiments in Years 8 and 12 is split between state and federal public funding; such experiments could be viewed more as basic research providing public benefit.

- Overall Funding of costs for the EWA 10-year plan results in an allocation of 41% of the costs to state taxpayers, 31% to federal taxpayers, and 28% to water users. Once the SWP and CVP water users begin to contribute and the Reserve Fund is in place, state/federal/users shares would approximate 25%/25%/50%.

ALLOCATION BY PERCENT

	YEARS 10–14	YEARS 5–14
State	25.5%	41%
Federal	25.5%	31%
Water Users	49%	28%

NOTE: Public allocation for years 10–14 slightly higher than 50% due to assumed public funding of adaptive management experiment in Year 12.

PERIODIC REVIEW

Periodic evaluations of EWA performance and needs will be used to assess potential adjustments in the program's operations and financing. An important part of the periodic review will be the Science Program review panel's assessment of EWA and its effects. Periodic assessment will address the following issues:

- Acquisition targets;
- Use and effectiveness of assets for fish population recovery;
- Program cost estimates, including unit cost estimates for acquisition;
- Program operations costs (including administrative and environmental costs);
- Appropriate allocation of costs between SWP and CVP and between the public and water users.

ISSUES

Funding Targets. Not all stakeholders agree that the funding targets are reasonable or necessary, including the water acquisition, science and administrative funding targets. Periodic review of acquisition targets, how the assets are used, and the effectiveness of EWA at restoring fish populations should be an ongoing part of EWA review.

8. The appropriate frequency of evaluation and adjustment is to be determined. However, both program managers and water users need some degree of predictability and stability in how the program is financed.

Proposition 50 Funding. The EWA is relying in the near-term on funding from Proposition 50 Chapter 7(d); Water Supply Reliability funds. There is concern by certain water users that the share of Chapter 7(d) dollars for EWA is too large and additional funds should be directed to other water supply reliability projects.

Reserve Fund. Some water users are questioning the need for an EWA reserve fund, and are concerned that its availability could encourage a higher level of spending than is necessary to achieve program objectives.

Federal Appropriations. Reclamation and some stakeholders question the feasibility of such large federal appropriations for EWA. The 50-50 state/federal split of the public's cost share may shift more to the state if federal appropriations fall short.

Water User Contribution. Environmental stakeholders do not believe that the water users' contributions should be delayed until 8500 cfs pumping is permitted, or that water users' overall share over the 10 years should be less than the public share. Because water users are receiving benefits currently, environmental stakeholders believe contributions should begin now. Export water users have indicated a willingness to contribute to the EWA only if regulatory assurance and linkages to Delta water supply benefits are provided.

Restoration Fund. Reclamation, some CVP water users, and other stakeholders are concerned that the magnitude of Restoration Fund revenue dedicated to the EWA will delay other restoration projects that could have been funded, and may result in pressure to increase or extend Restoration Payments or other obligations of contractors. Environmental stakeholders are especially concerned that EWA's use of the Restoration Fund will displace other restoration projects and programs.

Environmental Water Account — Allocation by Dollars ($ in millions)

Program Year	Funding Targets [1]	Available Funding				Additional Funding for Unmet Needs					
		State		Federal	Total Available	Unmet Needs	State [2]	Federal [3]	Water Users[4]		Total Additional Funding
		Prop 204	Prop 50						SWP	CVPIA-RF[5]	
Year 5	$43.3	$7.6	$27.7	$8.0	$43.3						$0.0
Year 6	$72.1		$45.1		$45.1	$27.0		$27.0			$27.0
Year 7	$52.1		$9.5		$9.5	$42.6	$16.0	$26.6			$42.6
Year 8	$47.2				$0.0	$47.2	$14.8	$14.8	$8.8	$8.8	$47.2
Year 9	$43.2				$0.0	$43.2	$12.8	$12.8	$8.8	$8.8	$43.2
Year 10	$35.2				$0.0	$35.2	$8.8	$8.8	$8.8	$8.8	$35.2
Year 11	$35.2				$0.0	$35.2	$8.8	$8.8	$8.8	$8.8	$35.2
Year 12	$39.2				$0.0	$39.2	$10.8	$10.8	$8.8	$8.8	$39.2
Year 13	$35.2				$0.0	$35.2	$8.8	$8.8	$8.8	$8.8	$35.2
Year 14	$35.2				$0.0	$35.2	$8.8	$8.8	$8.8	$8.8	$35.2
TOTAL	$437.9	$7.6	$82.3	$8.0	$97.9	$340.0	$89.6	$127.2	$61.6	$61.6	$340.0

1. Uses most current estimate of water acquisition cost, not indexed for inflation. Includes unspecified long-term acquisitions in years 6 and 7 and a reserve fund in years 8 and 9. If a different amount or timing of long-term acquisitions is made, the yearly pattern of both the funding target and the funding sources would shift.

2. Could be met by future bond funding or annual appropriations.

3. Years 6-10 based on authorized funding in federal legislation. Years 11-14 would require new authorization.

4. Proposed funding results in shares over Years 10-14 that approximate the Equal Cost Share allocation in the Finance Options Report (Table EWA-4). SWP and CVP split of the water users' share is shown as equal, but would be subject to periodic adjustment based on actual EWA operation. In years 8, 9, and 12, the same allocation is followed except that public funding is used to establish the reserve fund and to pay for adaptive management experiments.

5. Up to $10 million per year is authorized in federal legislation.

WATER USE EFFICIENCY PROGRAM

BACKGROUND AND FUNDING HISTORY

The goal of the Water Use Efficiency (WUE) Program is to advance implementation of cost-effective water conservation and recycling practices throughout the state that contribute to CALFED water supply reliability, water quality and ecosystem restoration goals. The WUE Program also will be working with the CALFED Program's Water Supply Subcommittee to develop implementation objectives for desalination, though this aspect of the program is in the very beginning stages of development.

Between 2000 and 2004, funding for the WUE Program has totaled $668 million ($213 million state, $85 million federal, $370 million local grant matching). Of this total, water conservation made up $154 million ($107 million state, $6 million federal, $41 million local) and water recycling totaled $543 million ($106 million state, $79 million federal, $358 million local). These amounts do not include the significant expenditures for water conservation and recycling activities carried out by public and private organizations that were not participating /cost sharing in the CALFED grants and loans.[9]

Between 2000 and 2004 WUE grant and loan programs have helped to implement 69 urban and 23 agricultural water conservation projects and 27 urban recycling projects. Expected annual yield from these projects is 89,000 acre-feet.[10] Other significant accomplishments during this period include development of definitions and implementation approaches for appropriate measurement of agricultural and urban water uses; development of agricultural Quantifiable Objectives; and crafting a stakeholder-supported framework for an urban conservation certification program. These and other WUE Program accomplishments are discussed in greater detail in the *Water Use Efficiency Program: Multi-Year Program Plan (Years 5–8)*.

FINANCE PLAN

FUNDING TARGET

The funding target for WUE over the 10 year planning period is $3.15 billion, or, on average, $315 million per year. Agricultural and urban conservation projects account for 26% of proposed WUE expenditures; recycling projects 48%; expenditures for desalination Research and Development (RD&D) and construction, 22%; and program coordination and oversight, WUE-related science, assurances, and technical assistance 4%.

Based on preliminary findings from the WUE Year 4 Comprehensive Review agricultural and urban conservation projects would generate approximately 520 thousand acre-feet of rerouted flow and 130,000 acre-feet of water supply benefits annually by 2014.[11,12] Recycling projects would add an additional 300,000 acre-feet of capacity by 2014 and desalination projects would add 160,000 acre-feet of capacity. In total, WUE expenditures are projected to generate over one million acre-feet of rerouted flow and water supply benefits for the state by 2014.[13]

The WUE funding target is informed by the following considerations:

- The funding target for agricultural ($33 million/year) and urban conservation ($50 million/year) projects is informed by preliminary results from the WUE Year 4 Comprehensive Review. This analysis evaluated local and statewide costs and returns for different rates of WUE Program expenditures for agricultural and urban conservation projects.[14] The analysis indicated the theoretical maximum annual rates of investment that would generate positive net benefits from a statewide perspective, as well as the division of benefits between local project sponsors and the CALFED Program. The funding target is set at roughly two-thirds the maximum investment rate.[15] This downward adjustment

9. Local expenditures for urban conservation projects made outside of the WUE program have substantially exceeded the local contribution shown in the text.

10. California Bay-Delta Authority, *Water Use Efficiency Program: Multi-Year Program Plan (Years 5-8)*, July 2004.

11. Savings in recoverable losses (rerouted flow) represent a much larger share of the total reductions in water diversions and use that result from agricultural WUE projects. Because these savings reduce stream diversions, they are available to meet flow-timing objectives. Recoverable losses are almost always reused in some fashion by other users: they help recharge groundwater, they provide water for riparian vegetation along canals and drains, and they are used for irrigation or municipal uses downstream. Projects that provide savings in recoverable losses will need to be carefully reviewed to avoid significant impacts on these other uses and to maximize the flow-timing and water quality benefits provided.

12. The investment models used to estimate agricultural conservation project costs and benefits did not include Imperial County because the QSA and water transfer agreements already account for such a large share of agricultural conservation potential in this region. Implicit in this modeling approach is the judgment that most agricultural conservation projects in Imperial County will not be funded through the WUE Program.

13. This amount would be incremental to conservation, recycling, and desalination investments made without WUE Program participation. For example, preliminary findings from the WUE Year 4 Comprehensive Review indicate that locally cost-effective urban BMP implementation could generate more than 700,000 acre-feet in water savings statewide by 2014.

14. The urban conservation investment models allocate over 50% of urban grant funds to the Central Valley, primarily for meter retrofit projects. While these projects generate significant water supply and flow/timing benefits, some stakeholders have expressed concern that allocating a large share of grant funds for meter retrofit projects would prevent projects being implemented in other regions of the state where they are needed.

15. The agricultural conservation investment models assume WUE grant programs will co-fund both district-level and on-farm conservation projects. Using state funds to pay for on-farm conservation projects has been problematic in the past. Using state grant funds for these projects will require resolving a number of legal and institutional issues. Directing funding to on-farm investment has been less a problem on the federal side, though coordinating this funding through the CALFED Program has been a challenge.

is made to account for uncertainties in the analysis, the state's capacity to administer and monitor grant and loan programs with existing resources, and state/federal budget constraints.

- The target for recycling is based on adding 750,000 acre-feet of new recycling capacity by 2030. This is the mid-point of the capacity range of cost-effective projects the Draft Finance Options Report (FOR) considered feasible by 2030.[16] Prorating the 2030 target of 750,000 acre-feet produced the 10-year target of 300,000 acre-feet of new recycling capacity by 2014. This capacity target is consistent with findings from the Bay Area and Southern California regional recycling studies for near-term implementation of recycling projects.[17] The 10-year funding target of $1.5 billion ($150 million/year) for recycling is based on an average capital cost of $5,000/acre-feet of added capacity.[18]

- The target for desalination was developed in consultation with DWR and is based on adding 160 thousand acre-feet of ocean and brackish water desalination capacity and funding $140 million in desalination research projects by 2011. In developing this target, DWR assumed that 20% of funds would be used for research projects and 80% for full implementation projects, and that implementation costs would average $2,000/acre-feet of added capacity for brackish desalination and $5,000/acre-feet for ocean desalination. The WUE Program will revisit these targets as cost and performance information from early implementation and research projects becomes available.

- Funding targets for assurances, technical assistance, and WUE-related science are tied to WUE Program cost projections to implement appropriate measurement programs, urban certification, continue development of Quantifiable Objectives, and support WUE monitoring, performance and science review, CALFED measurement and program coordination tasks. In total, these activities are expected to cost on average about $12 million per year.

AVAILABLE FUNDING

WUE has available $778 million in existing state/federal and local match sources of funding over the next 10 years. Almost all of this is earmarked for grant programs. Given existing funding sources, WUE will require additional funding of approximately $2.4 billion for the period 2005–2014.

FUNDING STRATEGY

Costs for WUE over the next 10 years will be split between the state government, the federal government, and local implementing agencies and organizations (through WUE grant matches and loans). The cost allocations for WUE vary by program component and are as follows:

1) Agricultural and Urban Conservation Projects

Cost shares will be based on the expected distribution of local and statewide benefits and will vary from project to project. These cost shares will be determined through competitive proposal solicitation processes for each funding year. A fixed cost share for agricultural and urban conservation projects is not proposed.

Preliminary results from the WUE *Year 4 Comprehensive Review* as well as a review of previous grant funding awards were used to predict the average cost share for urban and agricultural projects assuming a policy of setting cost shares according to the distribution of statewide and local benefits. This was necessary in order to forecast state, federal, and local expenditures over the 10-year planning period.

Based on this analysis, the average cost share for urban projects over the 10-year period is:

- State/federal: 40%
- Local implementing agencies/organizations: 60%

The average cost share for agricultural projects over the 10-year period is:

- State/federal: 60%
- Local implementing agencies/organizations: 40%

These allocations are informed by the following:

- The average shares are based on the WUE *Year 4 Comprehensive Review*'s assessment of local and statewide benefits generated by a range of agricultural and urban conservation investments throughout the state as well as a review of results from

16. The State Recycling Task Force report suggested it would be feasible to add up to 1.5 million acre-feet of new recycling capacity by 2030. Based on a review of regional recycling studies for the Bay Area and Southern California, the Draft FOR indicated that implementation of the most cost-effective projects could add between 500,000 and one million acre-feet of new capacity by 2030.

17. These studies identified projects that could be implemented over the next 10-15 years that would add approximately 450,000 acre-feet at an average capital cost of about $5,000/acre-feet of new capacity. SWRCB staff has suggested $6,500/acre-feet for capacity may be a better estimate for planning, based on more recent grant data. This would increase the funding target by $450 million.

18. Note this cost is not inclusive of operation and maintenance costs, which would be borne by the local project operator.

previous competitive conservation grant awards. The allocations match the distribution of local and statewide benefits estimated by the agricultural and urban conservation investment models.

- The higher local cost share anticipated for urban projects reflects (1) the higher marginal value of water in urban uses, which results in urban projects producing larger local benefits than agricultural projects; and (2) the lower cost to the state/federal governments to achieve flow/timing objectives through agricultural conservation projects compared to urban conservation projects.

- The allocations recognize both the benefits conservation can provide local water users as well as their potential to generate broad public benefits through improved in-stream flows, water quality, and regional supply reliability.

- The allocation table for WUE assigns 50% of state/federal costs to the state and 50% to the federal governments. This division of cost reflects state/federal costs shares for supply reliability and ecosystem public benefits within other program elements; follows the state/federal cost split for WUE in the ROD; and reflects the significant federal interest in the CVP as well as actions benefiting federally listed species. However, the share of public cost paid by either the state or federal governments is considered flexible, and will depend on availability of State and federal appropriations.

2) Recycling Projects

The allocation for recycling projects is 25% state/federal and 75% local. This allocation—a change from the existing 45% average cost-share by the state/federal governments—reflects the economic assessments from the Bay Area and Southern California regional recycling studies, which indicated local water supply and quality benefits would be sufficient to cover project costs, but also recognizes that there are potential implementation and institutional barriers preventing local agencies from fully capturing these benefits. The 25% public cost share is intended to overcome these local implementation barriers. Agencies will devise a process for determining cost-shares that maximizes public funding for public benefits. This may involve developing cost-shares on a project-by-project basis or it may utilize a process that has standardized cost shares based on average benefits.

3) Desalination Projects

For desalination projects, the allocations are as follows:

- Research: 50% state/federal, 50% local
- Implementation: 25% state/federal, 75% local

The higher public cost share for research is justified on the grounds that research and development projects have the potential to provide broader, transferable benefits of national significance. The public cost share for desalination implementation projects is consistent with the recycling allocation and is intended to help local project implementers overcome financial and institutional barriers. The 75% local cost share for desalination implementation projects reflects the fact that these projects primarily provide local water supply benefits.

4) Technical Assistance, Assurances, Science, Oversight and Coordination

The allocation for these activities is 100% state/federal. The benefits generated by this category of program activity are broadly distributed across all water users and the general public. For example, all water users benefit from research, pilot, and monitoring projects that increase understanding of performance, cost, and implementation issues for different conservation, recycling, or desalination technologies or implementation strategies. Likewise, WUE assurance programs (e.g. urban certification, Quantifiable Objectives, Appropriate Measurement) can benefit all water users by promoting improvements in water management and implementation of best management practices that contribute to meeting CALFED Program objectives. These benefits satisfy the definition of a public good and therefore costs for these program activities are assigned to the public. The WUE allocation table shows these costs evenly divided between state and federal funding sources. However, the share of public cost paid by either the state or federal governments is considered flexible, and will depend availability of State and federal appropriations.

ALLOCATION BY PERCENT

PROGRAM COMPONENTS	STATE	FEDERAL	LOCAL MATCH
Urban Conservation Projects	21%	19%	60%
Agriculture Convservation Projects	33%	27%	40%
Water Recycling	13%	12%	75%
Desalination Implementation	13%	12%	75%
Desalination Research	24%	26%	50%
Technical Assistance, Assurances, Science, Oversight & Coordination	50%	50%	—
Total Percentage Allocation	**18%**	**17%**	**65%**

OVERALL COST ALLOCATION FOR WUE

Overall, the Finance Plan allocates WUE costs as follows:

- State/federal: 35%
- Local: 65%

The allocation between state and federal funding is roughly 50-50. However, this allocation of public cost is flexible and will be adjusted overtime to reflect state and federal fiscal realities.

PERIODIC REVIEW

Periodic review of program objectives, funding targets, and program effectiveness is warranted, both for potential revisions to funding targets and for longer-term planning beyond the 10-year Plan's horizon. Future decisions about other CALFED programs such as ERP, Conveyance, or Storage can affect the benefits and costs of WUE projects. The funding target for desalination will be closely reviewed as cost and performance information is made available from early implementation and research investments.

ISSUES

There are three key issues related to the WUE Finance Plan. These are as follows:

Conservation and recycling targets. Some stakeholders are concerned that the funding targets for conservation and recycling grant/loan programs are too low and some water users believe the targets are too high. They argue that these WUE investments provide broad public benefits, reduce surface and groundwater diversions, and help to reduce wastewater discharge, and therefore should be aggressively pursued and given high priority for public funding.

Recycling cost share. Some stakeholders are concerned that the public cost share for recycling projects is too low and will undermine the ability of local agencies to implement these projects. They feel strongly that the Finance Plan should maintain the status quo allocation, which is approximately 45% state/federal and 55% local.

Federal appropriations. The finance proposal for WUE will potentially require significant federal appropriations. Even without considering federal participation in recycling projects, there is some uncertainty whether federal appropriations of this magnitude are realistic. Historically there has not been significant federal participation in conservation grant funding. There is currently no federal authorization to co-fund a CALFED desalination grant program. Federal funding for recycling projects requires congressional authorization through the Title XVI program, which creates additional federal funding uncertainty. The Bureau of Reclamation has suggested that more realistic federal funding assumptions would be $2–4 million/year for conservation projects and $10–15 million for recycling. The Bureau of Reclamation did not comment on federal funding for desalination.

Water Use Efficiency Program — Allocation Summary by Dollars ($ in millions)

Program Year	Funding Targets	Available Funding							Additional Funding for Unmet Needs				
		State				Federal	Local Match	Total Available Funding	Unmet Needs	State	Federal	Local Match	Total Additional Funding
		General Fund	Prop 13	Prop 50	ERPA[1]								
Year 5	**$305.3**	$1.4	$30.3	$50.6	$1.7	$12.4	$175.1	**$271.5**	$33.8		$13.0	$20.7	**$33.7**
Year 6	**$305.3**	$1.4	$3.5	$53.1	$1.7		$103.0	**$162.7**	$142.6		$49.8	$92.9	**$142.7**
Year 7	**$325.3**	$1.4	$3.5	$45.2	$1.7		$88.0	**$139.8**	$185.5	$10.4	$52.3	$122.9	**$185.5**
Year 8	**$325.3**	$1.4	$3.5	$38.3	$1.7		$81.0	**$125.9**	$199.4	$10.4	$59.3	$129.9	**$199.6**
Year 9	**$325.3**	$1.4	$3.5	$12.8	$1.7		$18.5	**$38.0**	$287.3	$32.8	$62.3	$192.1	**$287.1**
Year 10	**$325.3**	$1.4		$10.0	$1.7		$6.7	**$19.8**	$305.5	$39.1	$62.3	$204.2	**$305.6**
Year 11	**$325.3**	$1.4		$4.6	$1.7		$3.1	**$10.8**	$314.5	$44.5	$62.3	$207.7	**$314.4**
Year 12	**$305.3**	$1.4			$1.7			**$3.1**	$302.2	$49.1	$52.3	$200.8	**$302.2**
Year 13	**$305.3**	$1.4			$1.7			**$3.1**	$302.2	$49.1	$52.3	$200.8	**$302.2**
Year 14	**$305.3**	$1.4			$1.7			**$3.1**	$302.2	$49.1	$52.3	$200.8	**$302.2**
TOTAL	**$3,153.0**	**$14.4**	**$44.4**	**$214.5**	**$17.0**	**$12.4**	**$475.3**	**$778.0**	**$2,375.1**	**$284.4**	**$517.8**	**$1,572.9**	**$2,375.1**

PROGRAM ELEMENT FINANCE PLANS: WATER USE EFFICIENCY

Water Use Efficiency Program — Allocation by Dollars ($ in millions)

Program Year	Funding Targets	Available Funding							Additional Funding for Unmet Needs				
		State				Federal	Local Match	Total Available Funding	Unmet Needs	State	Federal	Local Match	Total Additional Funding
		General Fund	Prop 13	Prop 50	ERPA [1]								
Urban Conservation Projects													
Year 5	$50.0		$0.2	$16.9		$0.7	$26.7	$44.5	$5.5		$2.2	$3.3	$5.5
Year 6	$50.0			$10.0			$15.0	$25.0	$25.0		$10.0	$15.0	$25.0
Year 7	$50.0			$10.0			$15.0	$25.0	$25.0		$10.0	$15.0	$25.0
Year 8	$50.0			$10.0			$15.0	$25.0	$25.0		$10.0	$15.0	$25.0
Year 9	$50.0			$4.7			$7.1	$11.8	$38.3	$5.3	$10.0	$23.0	$38.3
Year 10	$50.0							$0.0	$50.0	$10.0	$10.0	$30.0	$50.0
Year 11	$50.0							$0.0	$50.0	$10.0	$10.0	$30.0	$50.0
Year 12	$50.0							$0.0	$50.0	$10.0	$10.0	$30.0	$50.0
Year 13	$50.0							$0.0	$50.0	$10.0	$10.0	$30.0	$50.0
Year 14	$50.0							$0.0	$50.0	$10.0	$10.0	$30.0	$50.0
Subtotal	$500.0	$0.0	$0.2	$51.6	$0.0	$0.7	$78.8	$131.3	$368.8	$55.3	$92.2	$221.3	$368.8
Agricultural Conservation Projects													
Year 5	$33.3		$8.4	$10.8		$0.7	$13.3	$33.3	$0.0				$0.0
Year 6	$33.3		$3.5	$6.5			$6.7	$16.7	$16.7		$10.0	$6.7	$16.7
Year 7	$33.3		$3.5	$6.5			$6.6	$16.6	$16.7		$10.0	$6.7	$16.7
Year 8	$33.3		$3.5	$6.5			$6.7	$16.7	$16.6		$10.0	$6.7	$16.7
Year 9	$33.3		$3.5	$6.5			$6.7	$16.7	$16.6		$10.0	$6.7	$16.7
Year 10	$33.3			$10.0			$6.7	$16.7	$16.6		$10.0	$6.7	$16.7
Year 11	$33.3			$4.6			$3.1	$7.7	$25.6	$5.4	$10.0	$10.2	$25.6
Year 12	$33.3							$0.0	$33.3	$10.0	$10.0	$13.3	$33.3
Year 13	$33.3							$0.0	$33.3	$10.0	$10.0	$13.3	$33.3
Year 14	$33.3							$0.0	$33.3	$10.0	$10.0	$13.3	$33.3
Subtotal	$333.0	$0.0	$22.5	$51.3	$0.0	$0.7	$49.7	$124.2	$208.9	$35.4	$90.0	$83.6	$208.9
Water Recycling [2]													
Year 5	$150.0		$21.7			$10.0	$95.1	$126.8	$23.2		$5.8	$17.4	$23.2
Year 6	$150.0			$18.8			$56.3	$75.1	$74.9		$18.8	$56.3	$75.0
Year 7	$150.0			$18.8			$56.3	$75.1	$74.9		$18.8	$56.3	$75.0
Year 8	$150.0			$18.8			$56.3	$75.1	$74.9		$18.8	$56.3	$75.0
Year 9	$150.0			$1.6			$4.8	$6.4	$143.6	$17.1	$18.8	$107.5	$143.3
Year 10	$150.0							$0.0	$150.0	$18.8	$18.8	$112.5	$150.0
Year 11	$150.0							$0.0	$150.0	$18.8	$18.8	$112.5	$150.0
Year 12	$150.0							$0.0	$150.0	$18.8	$18.8	$112.5	$150.0
Year 13	$150.0							$0.0	$150.0	$18.8	$18.8	$112.5	$150.0
Year 14	$150.0							$0.0	$150.0	$18.8	$18.8	$112.5	$150.0
Subtotal	$1,500.0	$0.0	$21.7	$57.9	$0.0	$10.0	$268.9	$358.5	$1,141.5	$110.8	$174.6	$856.1	$1,141.5
Desalination Implementation [3]													
Year 5	$40.0			$10.0			$30.0	$40.0	$0.0				$0.0
Year 6	$40.0			$5.0			$15.0	$20.0	$20.0		$5.0	$15.0	$20.0
Year 7	$60.0							$0.0	$60.0	$7.5	$7.5	$45.0	$60.0
Year 8	$60.0							$0.0	$60.0	$7.5	$7.5	$45.0	$60.0
Year 9	$60.0							$0.0	$60.0	$7.5	$7.5	$45.0	$60.0
Year 10	$60.0							$0.0	$60.0	$7.5	$7.5	$45.0	$60.0
Year 11	$60.0							$0.0	$60.0	$7.5	$7.5	$45.0	$60.0
Year 12	$60.0							$0.0	$60.0	$7.5	$7.5	$45.0	$60.0
Year 13	$60.0							$0.0	$60.0	$7.5	$7.5	$45.0	$60.0
Year 14	$60.0							$0.0	$60.0	$7.5	$7.5	$45.0	$60.0
Subtotal	$560.0	$0.0	$0.0	$15.0	$0.0	$0.0	$45.0	$60.0	$500.0	$60.0	$65.0	$375.0	$500.0
Desalination Research [4]													
Year 5	$20.0			$10.0			$10.0	$20.0	$0.0				$0.0
Year 6	$20.0			$10.0			$10.0	$20.0	$0.0				$0.0
Year 7	$20.0			$10.0			$10.0	$20.0	$0.0				$0.0
Year 8	$20.0			$3.0			$3.0	$6.0	$14.0		$7.0	$7.0	$14.0
Year 9	$20.0							$0.0	$20.0		$10.0	$10.0	$20.0
Year 10	$20.0							$0.0	$20.0		$10.0	$10.0	$20.0
Year 11	$20.0							$0.0	$20.0		$10.0	$10.0	$20.0
Year 12								$0.0	$0.0				$0.0
Year 13								$0.0	$0.0				$0.0
Year 14								$0.0	$0.0				$0.0
Subtotal	$140.0	$0.0	$0.0	$33.0	$0.0	$0.0	$33.0	$66.0	$74.0	$0.0	$37.0	$37.0	$74.0
Tech. Asst, Assurances, Science, Oversight & Coord.													
Year 5	$12.0	$1.4		$2.9	$1.7	$1.0		$6.9	$5.1		$5.0		$5.0
Year 6	$12.0	$1.4		$2.9	$1.7			$6.0	$6.0		$6.0		$6.0
Year 7	$12.0	$1.4			$1.7			$3.1	$8.9	$2.9	$6.0		$8.9
Year 8	$12.0	$1.4			$1.7			$3.1	$8.9	$2.9	$6.0		$8.9
Year 9	$12.0	$1.4			$1.7			$3.1	$8.9	$2.9	$6.0		$8.9
Year 10	$12.0	$1.4			$1.7			$3.1	$8.9	$2.9	$6.0		$8.9
Year 11	$12.0	$1.4			$1.7			$3.1	$8.9	$2.9	$6.0		$8.9
Year 12	$12.0	$1.4			$1.7			$3.1	$8.9	$2.9	$6.0		$8.9
Year 13	$12.0	$1.4			$1.7			$3.1	$8.9	$2.9	$6.0		$8.9
Year 14	$12.0	$1.4			$1.7			$3.1	$8.9	$2.9	$6.0		$8.9
Subtotal	$120.0	$14.4	$0.0	$5.7	$17.0	$1.0	$0.0	$38.1	$82.0	$22.9	$59.0	$0.0	$81.9
TOTAL	$3,153.0	$14.4	$44.4	$214.5	$17.0	$12.4	$475.3	$778.0	$2,375.1	$284.4	$517.8	$1,572.9	$2,375.1

1. Energy Resources Program Account.
2. Recycling: Local match assumes a 25% state cost share, per draft final SWRCB Prop. 50 Recycling Grant Guidelines.
3. Desalination: Table assumes state/federal share of implementation costs would not exceed 25% of total cost.
4. Desalination: Table assumes state/federal share of research costs would not exceed 50% of total cost.

WATERSHEDS

BACKGROUND AND FUNDING HISTORY

The Watershed Program includes ongoing technical assistance, science, and administrative functions, but the largest share of program funding is provided for financial assistance for watershed assessments and local projects. During the program's initial four years of activity, funding has averaged about $27 million per year (ranging from a low of $14 million to a high of $42 million). Roughly 75% of the funding has been provided by State funds (bonds and General Funds) and a fourth provided by grant matching through local, federal, and water user sources. This amount does not include the costs of watershed protection and restoration activities carried out by other public and private organizations, especially local government entities, independent of the CALFED Bay-Delta Program.

FINANCE PLAN

FUNDING TARGET

The 10-year funding target for the Watershed Program is $423 million, or about $42.3 million per year. The Watershed Budget Justification in the Appendix provides a breakdown of costs associated with the funding target.

The funding target was developed using cost estimates for the various program components, and includes the costs to (1) complete watershed assessment and planning efforts throughout the solution area, either through competitive grants or directed actions; (2) establish and sustain an adequate level of technical assistance to local watershed programs; and (3) fully implement the Watershed Programs specific science agenda, including long-term monitoring of reference watersheds, and other actions identified in the Programs current multi-year plan. The cost estimates include relative shifts in Program emphasis during the period. Early year spending has a greater emphasis on competitive grants, watershed assessments, and capacity building. Over time a greater portion is expected to be spent on restoration projects, including competitive grants and directed grants.

AVAILABLE FUNDING

- Federal public share: None currently available
- State public share: $100,000 is currently appropriated from the General Fund in Year 5. This amount is assumed to continue for Years 6–14. A total of $46 million in Proposition 50 funding is available.
- Anticipated local and project-specific cost-shares of $8.3 million

These sources total $55.3 million and leave an unmet funding need of about $368 million over the 10-year period. Note that this need includes the expected contribution by local partners to match State and federal spending.

FUNDING STRATEGY

Watershed Program elements are grouped into two broad components for finance planning: (1) Projects and Local Activities, and (2) Other Program Components. The accompanying table shows the sources of funds proposed for the Watershed Program over 10 years. Watershed projects and local activities represent about 78% of total program costs, and include competitive grants, directed actions, and local coordinator support. The allocation for these program elements is:

ALLOCATION BY PERCENT

PROGRAM YEARS	STATE	FED	LOCAL MATCH GOV'T	LOCAL MATCH OTHERS
Watershed Projects & Local Activities, Years 6–14	40%	40%	5%	15%
Other Proram Components, Years 6–14	50%	50%	—	—
Total % Allocation, Years 5–14	**46%**	**38%**	**4%**	**12%**

NOTE: The state's public share is higher in Year 5 because the federal share doesn't begin until Year 6.

For Projects and Local Activities the key principles and assumptions used to derive the funding allocation are:

- A target average 20% cost share from local project sponsors and local government will be pursued for competitive grants, directed actions, and local coordinator support. This includes a 5% cost share from local government agencies, and a 15% cost share from other project-specific partners.

- Local government agencies with watershed management responsibilities already provide significant protection and restoration activities. Many of these activities provide broad public benefits beyond the geographic responsibility of the local agency, yet it often receives only small or no financial assistance from other funding sources. These local agencies are very often quite constrained financially, so their ability to participate in additional projects, even on a cost-share basis, is limited. For these reasons, local governments are allocated a relatively small cost share.

- The other project-specific partners could include local agencies, local private entities that perceive a benefit from participation, and broader regional entities with an interest in watershed protection and restoration. These partners are expected to participate at a level commensurate with their perceived benefits.

Based on the first four years of grant funding, a 15% cost share is included. The Program will use its competitive grant process to encourage greater cost-sharing by project-specific partners.

- Actual cost shares are likely to vary from project to project based on various considerations. For competitive grants, cost shares will be determined through the proposal solicitation processes for each funding year. For directed actions and capacity-building activities, the appropriate shares will be determined through negotiation with the local partners. Considerations may include: the relative split of local vs. regional or statewide benefits; financial or other resource constraints faced by the local agency and its taxpayers or ratepayers; and considerations of environmental justice.

- The remaining 80% of costs for competitive grants, directed actions, and local coordinator support is to be split between state and federal public sources. As stated in the Draft Finance Options Report, broad public benefits from watershed protection and restoration justify a significant public cost share, but the split of this share between state and federal sources is not clear-cut. Program performance evaluations will help answer this question in future. For the Finance Plan, a default allocation of equal shares to the state and federal public is adopted. Therefore the public share is allocated 40% state and 40% federal. This allocation begins in Year 6.

Other program components total about 22% of program costs, and include technical assistance, partnership seminars, program performance evaluation, science support, and administration. The allocation for these program elements is 100% State/federal.

- All costs of these activities are split evenly between state and federal public sources. These other activities are not tied to specific projects or local activities. The benefits generated by these elements are broadly distributed across the general public.

- Identifying federal funding sources is expected to be challenging. Existing federal programs provide funding for watershed-related activities, but are not primarily designed to support the goals and priorities of the BDA Watershed Program. It may be possible to identify portions of existing federal programs that meet Program objectives, but earmarking those funds for Watershed Program activities is likely to face agency resistance due to reductions in other programs that would be necessary.

Based on these principles and assumptions, the Finance Plan fills the unmet funding need as follows and further detailed in the table:

- Additional State public funding of $148.5 million is to be used in Years 7–14. This would likely be bond funds from one or two future statewide bonds, new state funding sources, or some of it could be annual General Fund appropriations. The funding target reflects net proceeds available to the Program (after bond issuance or other costs are paid).

- Additional federal public funding of $161.3 million over Years 6–14 of the Plan. Funds could come from new budget appropriations or from existing federal programs that have authorization and funding and that contribute to the goals of the BDA Watershed Program.

PERIODIC REVIEW

Periodic reevaluation of funding targets and spending priorities will be made. Ongoing evaluation of Program performance and benefits will be reported as part of the Program planning process. This process is especially important for the Watershed Program because a key part of its activities is support for watershed assessments to obtain better information about the current state of watersheds. This information is needed in order to identify and prioritize restoration projects and to estimate their costs. Periodic review will consider results from the Program's own watershed assessments, plus an evaluation of Program performance and specific project performance. This information can also be used to identify and quantify benefits and to re-evaluate appropriate cost shares among the beneficiaries.

ISSUES

Federal Appropriations. The Watershed BDPAC Subcommittee and other stakeholders are concerned about the availability and reliability of federal money for a large portion of program funding. Broad public benefits from watershed protection and restoration justify a significant public cost share, but the split of this share between state and federal sources is not clear-cut. Given the uncertainty of how the benefits will accrue, other allocations between state and federal sources might also be justified. Program performance evaluations will help answer this question in future. For the Finance Plan, a default allocation of equal shares to the state and federal public is put forward. The 50-50 State/federal cost share may shift more to the State if federal appropriations fall short.

Watershed Program — Allocation Summary by Dollars ($ in millions)

Program Year	Funding Targets[1]	Available Funding					Additional Funding for Unmet Needs					
		State		Local Match		Total Available Funding	Unmet Needs	State[3]	Federal[4]	Local Match		Total Additional Funding
		General Fund	Prop 50[2]	Local Gov't	Other Project-Specific Partners					Local Gov't	Other Project-Specific Partners	
Year 5	$40.7	$0.1	$34.1	$1.6	$4.8	$40.7	$0.0					$0.0
Year 6	$43.7	$0.1	$11.9	$0.5	$1.4	$13.8	$29.9		$18.6	$0.9	$2.8	$22.3
Year 7	$41.1	$0.1				$0.1	$41.0	$23.8	$17.3	$1.9	$5.6	$48.6
Year 8	$42.0	$0.1				$0.1	$41.9	$17.5	$17.6	$1.7	$5.0	$41.9
Year 9	$41.7	$0.1				$0.1	$41.6	$17.4	$17.5	$1.7	$5.0	$41.6
Year 10	$42.6	$0.1				$0.1	$42.5	$17.8	$17.9	$1.7	$5.0	$42.5
Year 11	$42.3	$0.1				$0.1	$42.2	$17.7	$17.8	$1.7	$5.0	$42.2
Year 12	$42.3	$0.1				$0.1	$42.2	$17.7	$17.8	$1.7	$5.0	$42.2
Year 13	$43.3	$0.1				$0.1	$43.2	$18.2	$18.3	$1.7	$5.0	$43.2
Year 14	$43.4	$0.1				$0.1	$43.3	$18.3	$18.4	$1.7	$5.0	$43.3
TOTAL	$422.9	$1.0	$46.0	$2.1	$6.2	$55.3	$367.7	$148.5	$161.3	$14.5	$43.4	$367.7

1. Based on a recent cost update estimated by the Program. Future costs (beginning with Year 6) are not adjusted for inflation.

2. $38.25 million remaining from Prop 50 for Year 5 and beyond, plus $7.725 million available from prior year appropriations that was not spent. Actual timing of bond approval and issuance may differ.

3. State funding for unmet needs could come from Prop 50 managed by other State agencies, new future bond funds, general fund, or other new state funding sources.

4. Federal funding could be from existing programs (such as NRCS, USFWS, or USFS watershed activities) or new programs.

5. Includes competitive grants, directed actions, and local coordinator support. Assumes a combination of the two allocation examples from the Finance Options Report, Table WAT-4, page 318. Public cost shares assume equal state and federal public shares.

6. Includes technical assistance, partnership seminars, performance tracking, science, and administration. Assumes public funding with equal state and federal public shares in years 6-14.

Watershed Program — Allocation by Dollars ($ in millions)

Program Year	Funding Targets[1]	Available Funding					Additional Funding for Unmet Needs					
		State		Local Match		Total Available Funding	Unmet Needs	State[3]	Federal[4]	Local Match		Total Additional Funding
		General Fund	Prop 50[2]	Local Gov't	Other Project-Specific Partners					Local Gov't	Other Project-Specific Partners	
Watershed Projects and Local Activities[5]												
Year 5	$32.3		$25.8	$1.6	$4.8	$32.3	$0.0					$0.0
Year 6	$32.3		$7.0	$0.5	$1.4	$8.8	$23.5		$12.9	$0.8	$2.4	$16.1
Year 7	$32.3					$0.0	$32.3	$18.8	$12.9	$2.0	$6.0	$39.7
Year 8	$33.3					$0.0	$33.3	$13.3	$13.3	$1.7	$5.0	$33.3
Year 9	$33.3					$0.0	$33.3	$13.3	$13.3	$1.7	$5.0	$33.3
Year 10	$33.4					$0.0	$33.4	$13.4	$13.4	$1.7	$5.0	$33.4
Year 11	$33.4					$0.0	$33.4	$13.4	$13.4	$1.7	$5.0	$33.4
Year 12	$33.4					$0.0	$33.4	$13.4	$13.4	$1.7	$5.0	$33.4
Year 13	$33.4					$0.0	$33.4	$13.4	$13.4	$1.7	$5.0	$33.4
Year 14	$33.5					$0.0	$33.5	$13.4	$13.4	$1.7	$5.0	$33.5
Subtotal	$330.5	$0.0	$32.8	$2.1	$6.2	$41.1	$289.5	$112.3	$119.3	$14.5	$43.4	$289.5
Other Program Components[6]												
Year 5	$8.4	$0.1	$8.3			$8.4	$0.0					$0.0
Year 6	$11.4	$0.1	$4.9			$5.0	$6.4		$5.7			$5.7
Year 7	$8.8	$0.1				$0.1	$8.7	$5.0	$4.4			$9.4
Year 8	$8.7	$0.1				$0.1	$8.6	$4.2	$4.3			$8.6
Year 9	$8.4	$0.1				$0.1	$8.3	$4.1	$4.2			$8.3
Year 10	$9.2	$0.1				$0.1	$9.1	$4.5	$4.6			$9.1
Year 11	$8.9	$0.1				$0.1	$8.8	$4.4	$4.5			$8.8
Year 12	$8.9	$0.1				$0.1	$8.8	$4.4	$4.5			$8.8
Year 13	$9.9	$0.1				$0.1	$9.8	$4.9	$5.0			$9.8
Year 14	$9.9	$0.1				$0.1	$9.8	$4.9	$5.0			$9.8
Subtotal	$92.4	$1.0	$13.2			$14.2	$78.2	$36.2	$42.0	$0.0	$0.0	$78.2
TOTAL	$422.9	$1.0	$46.0	$2.1	$6.2	$55.3	$367.7	$148.5	$161.3	$14.5	$43.4	$367.7

WATER QUALITY

BACKGROUND AND FUNDING HISTORY

The Water Quality Program consists of the Drinking Water Quality Program and the Ecosystem Water Quality Program. Since the Ecosystem Water Quality Program is included as an element of the Ecosystem Restoration Program, its detailed information is located in that section. The remainder of this text is focused on detailed information for the Drinking Water Quality Program. In addition, as projects in other program elements, such as Conveyance, are determined to have primarily water quality benefits, those projects will be managed as part of the DWQP. Two projects from the Conveyance Program, Franks Tract and Old River/Rock Slough Drainage Management, are now considered DWQP projects.

The goal of the Drinking Water Quality Program (DWQP) is to provide good water quality for the millions of Californians who rely on the Delta for all or part of their drinking water. One specific target in the CALFED Record of Decision is an "equivalent level of public health protection" (or ELPH) to numeric targets for disinfection by-product precursors in the Delta. These recognize that there are opportunities to improve water quality between source and tap, and have resulted in a program implementation strategy of developing regional water quality management plans (regional plans) to assist in identifying and prioritizing water quality improvement opportunities. Regional plans, which are the highest short-term priority for the program, will shape the program and its long-term funding needs. This Finance Plan reflects current program priorities, but development and implementation of regional water quality management plans is the top priority of the program and may significantly redefine the program and funding targets within the next three to five years.

During the program's initial four years of activity, funding (not including Franks Tract and Old River /Rock Slough projects) has averaged about $23 million per year (ranging from a low of $10 million to a high of $40 million). However, funding has been limited to a subset of activities due to funding constraints under the bond funds, leaving large parts of the program with little or no funding. For example, approximately 53% of the funding was for non-point source control projects managed by the State Water Resources Control Board, and approximately 21% ($20 million) was for the San Joaquin Valley/Southern California Water Exchange project. Roughly 91% of the funding has been provided by State funds (bonds and General Funds), with the remainder provided by grant matching through local, federal, and water user sources. This amount does not include the costs of drinking water quality activities carried out by other public and private organizations, independent of the CALFED Bay-Delta Program.

Ecosystem Restoration Program funds ($1.8 million from Proposition 13) supported a portion of Franks Tract studies to study potential fishery benefits. Studies of Franks Tract have led to the discovery of potential significant water quality benefits. Old River/Rock Slough Water Quality Improvement Projects (including Phase I of the Contra Costa Canal Encasement Project) have been funded primarily through State bond, USEPA, and SWP funding.

FINANCE PLAN

The funding target for the DWQP is $276 million for 2005–2014. This 10-year target is built upon the activities identified in the Year 5–8 Multiyear Program Plan for the DWQP. A summary of the SJRWQMP is provided below. The total funding target for the DWQP over 10 years is broken down by the following components (potential capital projects are not included, and are discussed at the end of this section—an additional $320 million for four construction projects may be needed if projects proceed to construction).

- Regional water quality management plans ($12.6 million)
- Source improvement ($207 million: $2 million for directed actions, $41 million for Conveyance projects that yield source improvement, and $164 million for augmenting non-point source programs)
- Treatment ($34 million)
- Science, monitoring, & assessment ($15.6 million)
- Program management & oversight ($7 million)

Implementation for the San Joaquin River Water Quality Management Program (SJRWQMP) is still under review and therefore not included in the finance targets and allocations in this Plan. Currently the 10 year target is estimated to be $288 million. Discussions will continue and revised funding targets and cost allocations will be proposed in the next year.

1) REGIONAL WATER QUALITY MANAGEMENT PLANS

FUNDING TARGET

The funding target for regional water quality management plans is $12.6 million. This target is based on an estimate $2 million per plan for five large regions, and includes the cost of coordinating these efforts. Completion of Regional plans is a top priority for the DWQP. The DWQP is currently funding three pilot regional planning efforts, and has funded the Bay Area Water Quality/Water Supply Reliability Project. Because of the priority to complete these plans soon in order to influence future priorities, the $12.6 million is

scheduled in the first 3 years (Years 5–7).

AVAILABLE FUNDING

Approximately $900,000 is available for this activity in the current year. The DWQP is currently funding three small regional water quality management plans ($750,000 General Fund) and is also funding part of the Bay Area Water Quality and Water Supply Reliability Project ($150,000). There is also possible funding available under Proposition 50 Chapter 8, which could provide the remaining public share of funding for the regional plans. The specific amounts that will be available for Proposition 50 will not be known until funding is awarded in late 2005 or early 2006.

FUNDING STRATEGY

The funding allocation for regional planning is 50% public (25%state/25%federal), 50% local cost share. This allocation is based on the following consideration:

- A public cost share is considered necessary to ensure the regional plans are comprehensive in their approach and consider a range of inter-regional water quality issues.
- Sole reliance on local funding would not provide individual regions incentive to address water quality issues beyond their immediate regional interest.

At this time it is likely although not certain that the public share can be provided from existing state bond funds through Proposition 50 Chapter 8 (Integrated Regional Water Management Planning). The first round of decision for Proposition 50 Chapter 8 grants is expected to be made in July 2005. If the necessary public share ($6.6 million) is not provided from Proposition 50 funding for this activity in 2005 or 2006, the options are to request State and./or Federal funding starting in Year 7. Because of the uncertainty of receiving Proposition 50 funding, the funding shown in the water quality table reflects no state funding until Year 7 when additional state funds are expected; but federal funding is shown to begin in Year 6.

2) SOURCE IMPROVEMENT: CALIFORNIA AQUEDUCT WATERSHED ACTIONS

Specific source improvement directed actions are included in the CALFED Record of Decision—improvements to the water quality within the California Aqueduct and other conveyances.

FUNDING TARGETS AND AVAILABLE FUNDING

The funding target for California Aqueduct Watershed actions is $2 million, in order to conduct a feasibility study to determine water quality benefits of non-point source improvements and physical changes. There is no funding target for regional water quality exchange programs, as the Southern California-San Joaquin Regional Water Quality Exchange Project is currently funded through 2009. There is no funding identified as available for this activity.

FUNDING STRATEGY

The allocation is 100% State Water Project water users beginning in Year 5 ($1million/year), since they are the primary beneficiary of the study which would identify and prioritize potential water quality improvement projects. Actions identified in the feasibility study would be evaluated for appropriate funding strategies.

3) SOURCE IMPROVEMENT: FRANKS TRACT AND OLD RIVER/ROCK SLOUGH

Two projects (Franks Tract and Old River & Rock Slough Water Quality Improvement) have been moved from the Conveyance Program to the DWQP finance section, based on the purposes of the projects and their benefit to water quality.

FUNDING TARGET AND AVAILABLE FUNDING

Franks Tract. The DWQP includes the near-term actions of the Franks Tract project, the feasibility study and phase I of design and construction, followed by an evaluation to determine the benefits of pursuing additional actions.

The funding target for the feasibility study, which includes environmental compliance, preliminary design and initial scientific studies, is $13.4 million and concludes in Year 6. The funding target for Phase I, which includes design and construction of small levee repairs to reduce salt accumulation in the Delta, is $17 million and concludes in Year 8. Additional phases of this project are addressed in the Potential Capital Projects section. The feasibility study is currently funded with $1.8 million from Proposition 13 and with $2.5 million from the SWP water users, leaving an unmet need of $9.2 million.

Old River & Rock Slough. The funding target for the Old River & Rock Slough Water Quality Improvement project is $10.3 million, and is fully funded in Year 5. The Old River/Rock Slough Water Quality Improvement Projects are estimated to complete construction by July 2005, and are fully funded with $450,000 from the USEPA, $4.1 million in Proposition 13 funds, and $710,000 from SWP users. The Contra Costa Canal Encasement Phase I project has received $7.3 million from Proposition 13 and $200,000 from Reclamation, and is not anticipated to require additional funding.

FUNDING STRATEGY

The allocation for the Franks Tract feasibility study ($13.4 million) is 19% SWP, as they have already dedicated funding to the study, with the remainder split 40.5% state and 40.5% federal.

The allocation for Franks Tract Phase 1 ($17 million) is based on estimated benefits of the project if it is operated for water quality improvements: 25% public (state/federal), 25% CVP water users, 50% SWP water users. This allocation is based on the following considerations:

- The primary benefits expected from this project are improved water quality for SWP and CVP Delta M&I water users and for regulatory relief and improved water quality for SWP and CVP Delta agricultural water users.
- However, realization of water quality benefits will depend on either operation agreements or changes to the Water Quality Control Plan.
- Other significant benefits that may result from this project include ecosystem and water supply benefits.
- The benefits of this project, and the overall allocation of costs, will have to be reevaluated between project phases.

Proposition 50 Chapter 7 (b) funding is proposed to be used for the state share of feasibility and construction of Phase 1. Federal funding is also scheduled to begin in year 6. Recently passed federal legislation includes this project in the list of Conveyance Projects proposed for federal funding.

4) SOURCE IMPROVEMENT: NONPOINT SOURCE IMPROVEMENT GRANTS

FUNDING TARGET

Source improvement also includes augmenting existing programs which nonpoint source water quality impairment focused on constituents of particular concern to drinking water, a concept supported by the CALFED ROD (which contains several milestones related to coordinated BMP implementation). While regional plans are being developed to determine the relative importance of such actions, the Finance Plan recommends limiting funding in the first 3 years ($7 million per year, which includes the local cost match), and reevaluating the target to determine the appropriate level of funding in this category. Currently, the targets in Years 8–14 reflect historic funding levels ($21 million/year, which includes the local cost match).

AVAILABLE FUNDING

In Year 5, the DWQP has committed $1.8 million to one nonpoint source improvement project in the Delta. There is $2.9 million remaining from Proposition 13, which is tied to construction related to agricultural drainage in the Delta.

FUNDING STRATEGY

In the past, public funds have partially funded DWQP nonpoint source improvement projects with a range of 0%–95% local cost share. The allocation as a program average target is: 25% state, 25% federal, 50% local. The allocation is based on the following considerations:

- These costs share represent average cost shares. The actual cost shares will vary based on local and public benefits identified associated with each project.
- Public funding is appropriate because the type of nonpoint source improvement projects the DWQP supports are generally not locally cost-effective and support state and federal clean water goals.
- Local and public contributions would vary on a project by project basis in order to follow a benefits-based approach.

Funding is not specifically scheduled for this activity until Year 7, but possible existing state or federal funding sources may provide a public share in earlier years (Years 5 or 6). Possible state funding that may be available includes Proposition 50 Chapter 5 Agricultural Water Quality Grant Program—with the first funding decisions expected in Year 5—and Chapter 4 Source Improvement Grants and Chapter 8 Integrated Regional Water Management Projects—both with funding decisions expected in early Year 6. Possible federal funding sources include the Clean Water Act Section 319 nonpoint Source Grants (USEPA) and Environmental Quality Incentives Program grants (NRCS). None of these funding sources are dedicated to the DWQP and are therefore not included in the allocation.

5) TREATMENT TECHNOLOGY DEMONSTRATION

The DWQP has invested $2 million in state funding for four treatment technology demonstration projects, three of which have concluded or are in the process of concluding. A San Francisco Bay Area project has recently begun, and has received public funding for Phase 1 of a two-phase demonstration project. The DWQP will rely on advice from a science panel to determine the future funding and priority for treatment technology demonstration projects. Should the activity continue, the funding target is based on a grant program in the area of treatment technology demonstration, focusing on projects which have a high degree of transferability (i.e. the resulting information can be used by a large number of utilities) and on contaminants of the most concern to the program. The program does not envision funding full-

scale implementation of treatment technology, which is left to the existing state and federal programs.

FUNDING TARGET AND AVAILABLE FUNDING

The funding target for a grant program is $3.4 million/year based on the expected cost of the projects and the estimates number of projects that may need to be built. There is no funding identified as available for this activity.

FUNDING STRATEGY

The allocation is: 25% state, 25% federal, 50% local. This allocation is based on the following considerations:

- These costs share represent average cost shares. The actual cost shares will vary based on local and public benefits identified associated with each project.
- The public benefit of research studies have wide applicability and justifies the 50% public cost share.
- The DWS generally indicated support for funding to be shared between state, federal and local sources. In the past, treatment demonstration projects have been publicly funded with an approximate 40% local cost share.

Federal funding is scheduled to begin in Year 6 and State funding is shown in the table as starting in Year 7. However, possible state funding sources that may be available for the public share in Year 5 or 6 include Proposition 50 Chapters 4 and 6, with the first funding decisions expected in Year 5.

6) SCIENCE, MONITORING AND ASSESSMENT

The program will be conducting science, monitoring, and assessment activities over the next 10 years. These activities include completing an ELPH endpoint (or Public Health Index) study, support of the Water Management Science Board, completion of the Basin Plan Amendment process for the Central Valley Drinking Water Policy, performance measure development and program tracking, and a small grant program for assessment of water quality data.

FUNDING TARGET AND AVAILABLE FUNDING

The funding target is $15.6 million over 10 years; (approximately $1.6 million per year). The DWQP has not been able to directly fund a science, monitoring and assessment program, such as put forward for the next 10 years. The available funding in Year 5 and Year 6 is supporting the Central Valley Drinking Water Policy development, and includes $120,000 in a local match from the California Urban Water Agencies and the Sacramento Regional County Sanitation District.

FUNDING STRATEGY

The allocation is primarily public funding divided equally between the State and federal governments. Water users have provided funding for this activity that equals approximately 1% of the total cost over 10 years. The benefits of these activities are broad and diffuse and are expected to benefit both California and U.S. taxpayers equally.

7) PROGRAM MANAGEMENT & OVERSIGHT

FUNDING TARGET

The funding target is $700,000 per year for program management and oversight activities. The target is based on cost estimates for staff time to complete the above-mentioned tasks, in both the BDA and the implementing agencies.

AVAILABLE FUNDING

Current BDA program staff is funded through the General Fund (1.5 PY), and through Proposition 50 (1 PY for Years 5 and 6). Implementing agencies currently dedicate approximately 0.5 PY (Department of Health Services) and 0.6 PY (U.S. Environmental Protection Agency) of their staffing resources to the program. The Central Valley Regional Water Quality Control Board is currently calculating the resources they dedicate to the program.

FUNDING STRATEGY

The costs are fully allocated to the public (53% State, 47% federal). The State share is larger because there are more state implementing agencies than federal. Public funding is proposed because the benefits are broad and diffuse.

ALLOCATION BY PERCENT

PROGRAM COMPONENTS	STATE	FED	WATER USERS	LOCAL MATCH
Regional Water Quality Management Planning	25%	25%	—	50%
Source Improvement: Directed Actions California Aqueduct Watershed	—	—	100%	—
Source Improvement: Conveyance (Franks Tract OR/RS)	41%	22%	37%	—
Source Improvement: Nonpoint Source Improvement Grants	25%	25%	—	50%
Treatment Technology Demonstration	25%	25%	—	50%
Science, Monitoring and Assessment	49.6%	49.6%	—	0.8%
Program Management & Oversight	53%	47%	—	—
Total % Allocation	**29%**	**26%**	**6%**	**38%**

NOTE: The target reflects the completion of Phase I of the Franks Tract project and completion of Old River/Rock Slough Water Quality Improvement projects.

8) SAN JOAQUIN RIVER WATER QUALITY MANAGEMENT PROGRAM (SJRWQMP)

The recent, high-priority CALFED Delta Improvements Package (DIP) included specific water quality actions, referring to Implementation of the SJRWQMP, a combination of flow-related tools and load reduction tools. Additional discussion is needed to develop the funding strategy for each activity within the SJRWQMP and therefore there is no allocation or cost shares put forward at this time. The target is estimated at $288 million.

Reduction of salinity in the San Joaquin River is a stated goal for several state and federal programs, and it was specifically addressed in the CALFED Water Quality Program Plan and remains a high-priority objective for the DWQP. The largest challenge has always been in how to best achieve this goal in a highly managed system, with a large number of stakeholders, without redirecting significant water quality or supply impacts to the Delta or exacerbating other water quality or supply issues in the San Joaquin River system.

Reclamation has also been challenged by this goal in its effort to resolve its requirement to provide drainage service to the CVP San Luis Unit. The San Luis Delta-Mendota Authority holds Waste Discharge Requirements allowing it to use a portion of the San Luis Drain, while on a schedule to reduce selenium (and incidentally salinity) from the Grassland Bypass Project.

There are two recent regulatory actions by the Central Valley Regional Water Quality Control Board related to the SJRWQMP:

- The Conditional Waiver for Discharges from Irrigated Lands which requires monitoring, identification, and reduction of sources or significant water quality impairment due to irrigated lands throughout the Central Valley,
- The Basin Plan Amendment for the Control of Salt and Boron Discharge into the Lower San Joaquin River, which imposes load allocations on salinity sources, but within a framework that allows for the stakeholders to organize and implement alternative solutions that meet the same objectives (known as the San Joaquin River Water Quality Management Group).

Summarized below are the activities under consideration for the SJRWQMP. The BDA will participate in review of these activities and analysis of program benefits in order to develop a proposed cost allocation in 2005

FLOW RELATED ACTIONS: RECIRCULATION, COORDINATED FLOWS, AND WATER PURCHASES

The recirculation of San Joaquin River water using excess capacity of the Tracy Pumping Plant and/or Banks Pumping Plant through the Delta-Mendota Canal (DMC) and Newman Wasteway has the potential to improve water quality and flows in the San Joaquin River and the Delta. This would contribute to achieving the Vernalis salinity objectives (the objectives of the Lower San Joaquin River Salt and Boron TMDL), assist in reducing dissolved oxygen impairments in the Stockton Deep Water Ship Channel (SDWSC), and in general assist in implementing the DIP to protect and achieve multiple benefits.

The current cost estimates related to recirculation include $5 million in capital costs associated with improving Newman Wasteway, and $3 million in annual operating and maintenance costs ($30/acre-feet). Coordination of flows is generally an institutional arrangement, with nominal costs, to time the release of flows to improve water quality. Water purchases would provide additional flow when load reduction measures are uneconomical or unavailable, and the target for these purchases is $250,000 annually.

LOAD RELATED ACTIONS: LOWER DMC/EXCHANGE CONTRACTORS

The area west of the San Joaquin River has been identified as the greatest sources of salinity to the lower San Joaquin River (other than water imported through the Delta-Mendota Canal). The "lower" area referred to here is the service area of the Exchange Contractors. This activity involves the development of a system of groundwater pumping, salinity concentration, and salinity treatment (reverse osmosis). The current cost estimate is $30 million in capital costs and $3.5 million in annual operation and maintenance (O&M) costs.

LOAD RELATED ACTIONS: NORTHERN DMC, GRASSLAND BYPASS PROJECT, AND MANAGED WETLANDS

There are three activities in this category: Northern DMC load related actions, Grassland Bypass Project load related actions, and Managed Wetlands load related actions. Northern DMC refers to actions outside of the boundaries of the Exchange Contractors and the Grassland Bypass Project.

The Northern DMC Load Reductions activities and cost estimates are presumed similar to the Lower DMC activities, but are still being defined. The current cost estimate is $30 million in capital costs and $3 million annually in O&M costs. The Grassland Bypass Project actions include reuse projects, irrigation improvements, conveyance infrastructure improvements, and treatment and disposal. Current studies indicate that eliminating discharges from the Grassland area to the San Joaquin River will result in significant water quality improvements in the San Joaquin River. The cost estimate is $100 million in capital costs and $3 million annually

in O&M costs. Managed Wetlands includes construction of retention facilities and related infrastructure and the cost estimate is $25 million in capital costs and $200,000 annually in O&M costs.

PERIODIC REVIEW

This Finance Plan reflects current program priorities, but development and implementation of regional water quality management plans is the top priority of the program and may significantly redefine the program and funding targets within the next three to five years. Ongoing evaluation of Program performance and benefits will be reported periodically as part of the program plan. The DWQP is currently pursuing two efforts to evaluate its progress. One is a review of the status of all projects which have received funding to date and the other is the creation and initial assessment of program performance measures. These two efforts will combine to form a more complete picture of what the program has accomplished in its first four years. Initial information is expected to be available in February 2005 and will be used to guide future funding decisions and program priorities. Specifically, the funding targets and priorities may be adjusted as performance information becomes available.

POTENTIAL CAPITAL PROJECTS

There are several DWQP activities which could lead to large capital projects. Construction costs are not included in the funding targets for this 10-year Plan. The table below summarizes the preliminary estimates of construction costs for the five potential projects. These estimates do not include annual operations costs and may not be strictly comparable among them. These potential capital projects include: construction of the North Bay Aqueduct Alternative Intake, future phases of Franks Tract modifications, the Old River/Rock Slough Canal Encasement Phase II, and the relocation of the CCWD Old River Intake.

1) North Bay Aqueduct Intake Relocation: The feasibility study estimates a cost of up to $175 million with the project beginning in 2010. The North Bay Aqueduct currently experiences problems with total organic carbon and turbidity, largely due to the location of its intake.

2) Franks Tract Modifications, Phases II+: Following completion of Phase I, this project will be reevaluated as to the need for additional phases. The State Water Contractors have indicated that at a minimum, $13 million for gate construction may be required. Other anticipated work is estimated to cost $46 million.

3) Old River Intake Relocation: This project is an alternative in the Delta Improvements Package. Should the DIP water quality projects fail to provide acceptable continuous improvements in water quality, this project would improve water quality for CCWD. It is estimated to cost $62.8 million.

4) Contra Costa Canal Encasement Project, Phase II: This project would encase a portion of the currently earthen-lined Contra Costa Canal in the vicinity of both local development and the proposed Dutch Slough Tidal Marsh Restoration Project. Costs associated with this project may be more appropriate in the Ecosystem Program as mitigation of drinking water quality impacts.

This Finance Plan does not address financing tools or an allocation of potential construction costs because no decision has been made on whether to proceed with any of these projects. If construction of a project were to be recommended, a benefits-based approach for allocating costs will be used.

ISSUES

Regional Planning. Regional planning is the top program priority for the Drinking Water Program and the DWQ subcommittee. The lack of funding directed to this activity is a major concern to the stakeholders and the agencies.

Near-term Funding Gap. The DWQP does not have dedicated funding associated with Proposition 50 as do the other Program Elements. As such, there are near-term funding gaps that will either be filled with additional state and federal funding in future years, or possibly receive Proposition 50 funding through a statewide competitive grant process administered by either Department of Health Services, State Water Resources Control Board, or Department of Water Resources.

Federal Appropriations. The DWQ subcommittee encourages seeking additional federal partners in demonstrating water treatment technologies, such as the Department of Defense, Department of Energy and the National Aeronautics and Space Administration, especially with respect to treatment of contaminants associated with the defense industry. There may also be opportunities to partner with these agencies in transfer of technology and in sharing information.

Water Quality Program — Allocation by Dollars ($ in millions)														
Program Year	Funding Targets[1]	Available Funding					Total Additional Funding for Unmet Needs							
		State			Federal	Total Available Funding	Unmet Needs	State	Federal	Water User		Local Match	Total Additional Funding
		General Fund	Prop 13	Prop 50						SWP	CVP		
Year 5	**$29.0**	$1.7	$13.7	$0.3	$0.4	**$16.1**	$12.9		$0.2	$3.5		$0.2	**$4.0**
Year 6	**$28.7**	$0.5	$2.9	$0.3		**$3.8**	$24.9	$2.7	$11.7	$1.0		$6.4	**$21.7**
Year 7	**$29.6**	$0.5		$0.3		**$0.9**	$28.7	$6.6	$10.6	$5.9	$2.9	$14.8	**$40.7**
Year 8	**$31.7**	$0.5				**$0.5**	$31.2	$7.4	$7.8	$2.7	$1.3	$12.0	**$31.2**
Year 9	**$26.4**	$0.5				**$0.5**	$25.9	$6.8	$7.1			$12.0	**$25.9**
Year 10	**$26.1**	$0.5				**$0.5**	$25.6	$6.6	$7.0			$12.0	**$25.6**
Year 11	**$26.1**	$0.5				**$0.5**	$25.6	$6.6	$7.0			$12.0	**$25.6**
Year 12	**$26.1**	$0.5				**$0.5**	$25.6	$6.6	$7.0			$12.0	**$25.6**
Year 13	**$26.1**	$0.5				**$0.5**	$25.6	$6.6	$6.9			$12.0	**$25.6**
Year 14	**$26.1**	$0.5				**$0.5**	$25.6	$6.6	$6.9			$12.0	**$25.6**
TOTAL	**$275.9**	**$6.6**	**$16.6**	**$1.0**	**$0.4**	**$24.6**	**$251.3**	**$56.6**	**$72.1**	**$13.0**	**$4.3**	**$105.4**	**$251.3**

Water Quality Program — Allocation by Dollars ($ in millions)

Program Year	Funding Targets[1]	Available Funding					Additional Funding for Unmet Needs						
		State			Federal	Total Available Funding	Unmet Needs	State	Federal	Water User		Local Match	Total Additional Funding
		General Fund	Prop 13	Prop 50						SWP	CVP		
Regional Water Quality Management Planning													
Year 5	$1.1	$0.9				$0.9	$0.2					$0.2	$0.2
Year 6	$6.3					$0.0	$6.3		$1.8			$1.8	$3.7
Year 7	$5.3					$0.0	$5.3	$2.3	$1.3			$4.3	$7.8
Subtotal	$12.6	$0.9	$0.0	$0.0	$0.0	$0.9	$11.7	$2.3	$3.2	$0.0	$0.0	$6.3	$11.7
Source Improvement - Directed Actions - California Aqueduct Watershed Actions													
Year 5	$1.0					$0.0	$1.0			$1.0			$1.0
Year 6	$1.0					$0.0	$1.0			$1.0			$1.0
Subtotal	$2.0	$0.0	$0.0	$0.0	$0.0	$0.0	$2.0	$0.0	$0.0	$2.0	$0.0	$0.0	$2.0
Source Improvement - Conveyance (Franks Tract Old River/Rock Slough)													
Year 5	$14.6		$11.9		$0.2	$12.1	$2.5			$2.5			$2.5
Year 6	$9.1					$0.0	$9.1	$2.7	$6.5				$9.1
Year 7	$11.7					$0.0	$11.7	$1.5	$1.5	$5.9	$2.9		$11.7
Year 8	$5.3					$0.0	$5.3	$0.7	$0.7	$2.7	$1.3		$5.3
Subtotal	$40.7	$0.0	$11.9	$0.0	$0.2	$12.1	$28.6	$4.8	$8.6	$11.0	$4.3	$0.0	$28.6
Source Improvement - Nonpoint Source Improvement Grants													
Year 5	$6.6		$1.8			$1.8	$4.8	$0.0					$0.0
Year 6	$6.6		$2.9			$2.9	$3.7	$0.0	$0.0			$2.9	$2.9
Year 7	$6.6					$0.0	$6.6	$0.3	$5.0			$7.0	$12.2
Year 8	$20.6					$0.0	$20.6	$5.2	$5.2			$10.3	$20.6
Year 9	$20.6					$0.0	$20.6	$5.2	$5.2			$10.3	$20.6
Year 10	$20.6					$0.0	$20.6	$5.2	$5.2			$10.3	$20.6
Year 11	$20.6					$0.0	$20.6	$5.2	$5.2			$10.3	$20.6
Year 12	$20.6					$0.0	$20.6	$5.2	$5.2			$10.3	$20.6
Year 13	$20.6					$0.0	$20.6	$5.2	$5.2			$10.3	$20.6
Year 14	$20.6					$0.0	$20.6	$5.2	$5.2			$10.3	$20.6
Subtotal	$164.0	$0.0	$4.7	$0.0	$0.0	$4.7	$159.3	$36.3	$41.0	$0.0	$0.0	$82.0	$159.3
Treatment Technology Demonstration													
Year 5	$3.4					$0.0	$3.4						$0.0
Year 6	$3.4					$0.0	$3.4		$1.6			$1.6	$3.2
Year 7	$3.4					$0.0	$3.4	$1.9	$1.6			$3.5	$7.0
Year 8	$3.4					$0.0	$3.4	$0.9	$0.8			$1.7	$3.4
Year 9	$3.4					$0.0	$3.4	$0.9	$0.8			$1.7	$3.4
Year 10	$3.4					$0.0	$3.4	$0.9	$0.8			$1.7	$3.4
Year 11	$3.4					$0.0	$3.4	$0.9	$0.8			$1.7	$3.4
Year 12	$3.4					$0.0	$3.4	$0.9	$0.8			$1.7	$3.4
Year 13	$3.4					$0.0	$3.4	$0.9	$0.8			$1.7	$3.4
Year 14	$3.4					$0.0	$3.4	$0.9	$0.8			$1.7	$3.4
Subtotal	$34.0	$0.0	$0.0	$0.0	$0.0	$0.0	$34.0	$8.5	$8.5	$0.0	$0.0	$17.0	$34.0
Science, Monitoring and Assessment													
Year 5	$1.6	$0.5		$0.3	$0.1	$0.9	$0.7					$0.04	$0.0
Year 6	$1.6	$0.2		$0.3		$0.5	$1.1		$1.5			$0.04	$1.5
Year 7	$1.9	$0.2		$0.3		$0.5	$1.4	$0.7	$0.9			$0.04	$1.6
Year 8	$1.7	$0.2				$0.2	$1.5	$0.7	$0.9				$1.5
Year 9	$1.7	$0.2				$0.2	$1.5	$0.7	$0.9				$1.5
Year 10	$1.4	$0.2				$0.2	$1.3	$0.5	$0.7				$1.3
Year 11	$1.4	$0.2				$0.2	$1.3	$0.5	$0.7				$1.3
Year 12	$1.4	$0.2				$0.2	$1.3	$0.5	$0.7				$1.3
Year 13	$1.4	$0.2				$0.2	$1.2	$0.5	$0.7				$1.2
Year 14	$1.4	$0.2				$0.2	$1.2	$0.5	$0.7				$1.2
Subtotal	$15.6	$2.0	$0.0	$1.0	$0.1	$3.1	$12.5	$4.7	$7.7	$0.0	$0.0	$0.1	$12.5
Program Management & Oversight													
Year 5	$0.7	$0.4			$0.1	$0.5	$0.2		$0.2				$0.2
Year 6	$0.7	$0.4				$0.4	$0.3		$0.3				$0.3
Year 7	$0.7	$0.4				$0.4	$0.3		$0.3				$0.3
Year 8	$0.7	$0.4				$0.4	$0.3		$0.3				$0.3
Year 9	$0.7	$0.4				$0.4	$0.3		$0.3				$0.3
Year 10	$0.7	$0.4				$0.4	$0.3		$0.3				$0.3
Year 11	$0.7	$0.4				$0.4	$0.3		$0.3				$0.3
Year 12	$0.7	$0.4				$0.4	$0.3		$0.3				$0.3
Year 13	$0.7	$0.4				$0.4	$0.3		$0.3				$0.3
Year 14	$0.7	$0.4				$0.4	$0.3		$0.3				$0.3
Subtotal	$7.0	$3.7	$0.0	$0.0	$0.1	$3.8	$3.2	$0.0	$3.2	$0.0	$0.0	$0.0	$3.2
TOTAL	$275.9	$6.6	$16.6	$1.0	$0.4	$24.6	$251.3	$56.6	$72.1	$13.0	$4.3	$105.4	$251.3

1. Local grant match for Science, Monitoring, and Assessment currently committed by California Urban Water Agencies and Sacramento Regional County Sanitation District.

LEVEES

BACKGROUND AND FUNDING HISTORY

As one of the four main objectives of the CALFED Program, the Levees Program is an integral part of the success of CALFED along with Water Supply Reliability, Water Quality, and Ecosystem Restoration. The success of the Levees Program directly benefits these other three objectives. Many open issues surround a Finance Plan for the Levees Program. Therefore, the Finance Plan includes an interim finance strategy for the first 3 years, with a check-in point for review of funding targets and allocations in the Finance Plan after more information is available from potential new legislation and a Comprehensive Program Evaluation (CPE). The CPE is scheduled for Years 5–7, and will review priorities for the program. There is a near-term emphasis through Year 7 to maintain funding levels and priorities while the CPE is underway. The future of the levees program will be affected due to the following factors:

Program Sunset & Pending Legislation. Existing legislation for the Department of Water Resources (DWR) subventions and special projects programs will sunset on July 1, 2006, and it is recommended that legislation be developed to extend these programs. As this existing legislation only addresses a small component of the Suisun Marsh levees, it is also recommended that legislation be considered to fully address the Suisun Marsh levee system. As part of the legislative process, changes could be made to the levees program that would affect financing.

Federal Authorization. Federal authorization signed October 25, 2004 authorizes as much as $90 million for the Levees Program, including the Delta and Suisun Marsh Levees. The legislation requires the U.S. Army Corps of Engineers (USACE) to produce a report that describes the levee stability reconstruction projects and priorities that will be carried out under this title during each of fiscal years 2005 through 2010.

Comprehensive Program Evaluation (Strategic Plan). Over the next two to three years DWR is planning to lead a Comprehensive Program Evaluation (CPE) of the Levee Program. The CPE will incorporate the current risk study that has been commissioned by DWR, and supplement the risk study as needed. DWR is currently developing a scope of work for the CPE. The CPE is scheduled to begin in Year 5, and to be completed by the middle of Year 7 (State FY 2006–07). The USACE is also required under the new federal authorization to prepare a Delta Risk Management Strategy.

Habitat Management, Preservation, and Restoration Plan for Suisun Marsh (Suisun Marsh Plan—SMP). Preparation of the SMP is scheduled to be completed early in Year 7 (State FY 2006–07). The CALFED Ecosystem Restoration Program is funding the final plan and associated environmental documentation initiated under the Suisun Marsh Charter. The SMP will recommend priorities and estimate funding needs that will provide multiple benefits, such as flood protection, water quality, ecosystem restoration, and water supply reliability.

The Levees Program has two main components; the Delta Levees which has been the primary emphasis, and Suisun Marsh Levees which is a newer effort since the Record of Decision. Between 2000 and 2004, funding for the Levees Program totaled $83.9 million for the Delta Levees, and $6 million for the Suisun Marsh Levees, broken down as follows:

Delta Levees:
- $68 million State—primarily bond funds
- $1.2 million Federal
- $1.2 million State Water Project contractors, and
- $13.5 million local reclamation districts

Suisun Marsh Levees:
- $6 million private and public landowners

Funding has averaged about $21 million annually over this time period for the Delta and $1.5 million for the Suisun Marsh. Funding was for levee maintenance, levee improvements, habitat improvements, coordination, and studies. In addition, significant contributions were made before the ROD through DWR's Delta Levees subventions and special projects programs, which have been in place since 1972, and with State/U.S. Army Corps of Engineers projects qualified for flood assistance through Public Law 84-99 (PL 84-99 Emergency Rehabilitation of Flood Control Works or Federally Authorized Coastal Protection Works). A long history of the Delta Levees program has shown that as funding for maintenance and improvements has gone up, incidents of levee failure have gone down.

In the Suisun Marsh, continuing maintenance of levees has primarily been financed by local landowners with limited cost-sharing from DWR's special projects program for the levees bordering Honker and Suisun Bays. The Department of Fish and Game (DFG) maintains levees associated with the Grizzly Island Wildlife Area Complex in the Marsh, and DWR maintains levees associated with several project facilities constructed in the Marsh.

PROGRAM DESCRIPTION

DELTA LEVEES

The Delta Levees component is organized and described in the ROD with two primary activities: Base level protection (leading to PL 84-99 level of protection) and Special improvement projects. The relationship to DWR's existing Program: Delta Levee Subventions and Special Projects, has been confusing. In order to develop financing options for the Levees program, the following organization has been adopted:

Levee Maintenance. This activity is similar to DWR's existing subventions program, which provides for levee maintenance and improvements through a locally-driven subventions program. However, the objective of this activity is to provide funding for levee maintenance only, with the priority for funding being on local flood protection benefits. The maintenance program continues to rely on the existing method of distributing funding; a locally-driven subventions program. As with the existing subventions program, this activity would provide funding for full mitigation of habitat impacts resulting from levee maintenance activities.

Levee Improvements. The objective of this activity is to provide funding for levee improvements over an existing level of protection. This activity would include, but would not be limited to, base level protection leading to the PL 84-99 level of protection. It is similar to DWR's existing special projects program. Funding is based on priority areas that will provide multiple benefits, such as flood protection, water quality, ecosystem restoration, water supply reliability, and transportation benefits. As with the existing special projects program, this activity provides funding for full mitigation of habitat impacts resulting from levee improvement activities and also provides funding for habitat improvements (enhancements) for both the levee maintenance program and the levee improvements program. Funding allocations may vary by project depending on the benefits.

All Other Components. This includes the comprehensive program evaluation (strategic plan), risk assessment, subsidence control plan, emergency response, beneficial reuse of dredge material, program management, oversight, and coordination.

SUISUN MARSH LEVEES

Levee Maintenance. The objective of this activity is to provide funding for Suisun Marsh levee maintenance only, with the priority for funding being on local flood control benefits, maintaining SWP infrastructure, protecting existing ecosystem benefits, and protecting channel and export water quality.

Levee Improvements. The objective of this activity is to provide funding for Suisun Marsh levee improvements over an existing level of protection. Funding is based on priority areas that provide multiple benefits, such as flood protection, water quality, ecosystem restoration, water supply reliability, and transportation benefits.

Supporting Components. The objective of this activity is to provide the technical analysis and pilot study development necessary to support the maintenance and improvement components. This component includes a risk assessment, strategy for a subsidence control plan, an emergency management strategy, a strategy for beneficial reuse of dredge material, program management, oversight, and coordination.

FINANCE PLAN: DELTA LEVEES

DELTA LEVEES FUNDING TARGETS

Levee Maintenance. In Years 5–7, the funding target is $13.1 million/year, which reflects a status quo level of funding until the CPE is complete. In Years 8–14, the $17 million/year target includes $15 million for construction, $1.4 million for staff and operations, and a $600,000 local deductible. This funding target begins in Year 8, and is based on cost estimates from DWR and local reclamation districts to reflect the annual need for Delta levee maintenance, including the local share. For each district participating in the Delta Levee Maintenance Program, Water Code 12986 states that annually "... Not more than 75 percent of any costs incurred in excess of one thousand dollars ($1,000) per mile of project or nonproject levee shall be reimbursed." Each year an estimated 600 miles of levee participation in the program account for a $0.6 million local deductible.

Levee Improvements. In Years 5–7, the funding target ramps up to $12–17 million/year, generally following the status quo funding in the interim for state funding, but federal funding from new federal authorization increases the total. In Year 8, $30 million/year is estimated. This funding target is based on current knowledge of the Delta levees. When the CPE is complete, the funding target for Delta Levee Improvements will be revisited and could significantly increase.

All Other Components.
Years 5–7: $3.7 million average/year ($11 million total) for the CPE and other activities.
Years 8–14: $3 million/year for research, studies, oversight, and coordination.

- Comprehensive Program Evaluation
  For the CPE, $6 million is needed from Years 5–7. This is in addition to $5 million that is needed for other activities (described below) from Years 5–7. The funding target is based on staff estimates to complete the evaluation, including the risk study that is currently underway.

- Research, Studies, Oversight, and Coordination
  Beginning with Year 8, the funding target is $3 million/year. This funding target includes $1.8 million/year beginning in Year 6 in federal funding for the USACE to develop best management practices to control and reverse land subsidence on Delta islands, develop a Delta Levee Emergency Management and Response Plan, develop a Delta Risk Management Strategy, and continue coordination with the CALFED Levees Program. The remaining $1.2 million, beginning in Year 7, is for State funding at DWR for the CPE (strategic plan), risk assessment, subsidence control plan, emergency response, beneficial reuse of dredge material, program management, oversight, and coordination.

DELTA LEVEES AVAILABLE FUNDING

Approximately $48 million is available over the next 10 years. About $41 million is available from public sources (primarily Proposition 50) and about $7 million is available from local reclamation districts in Years 5–6 as a match to available State funding. During Years 5–7, while the CPE is underway, available Proposition 50 funding is approximately split equally between maintenance and improvements/all other components. This continues the status quo approach. Based on the total funding target for the Delta Levees Program of $446 million, the Levees Program will require an additional $399 million between Years 5–14, beginning with Year 6.

DELTA LEVEES FUNDING STRATEGY

Levee Maintenance. Cost shares for levee maintenance will take into account the distribution of state and local benefits, and will vary by project. Overall, the cost share is expected to be:

- Levee maintenance: up to 75% State, and no less than 25% local cost share, which continues the status quo in existing law.
- 100% State funding for staff and operations
- Local reclamation districts will pay a deductible of $1,000/levee mile which is 100% locally funded.
- For a $17 million annual maintenance program, this amounts to $12.65 million State, and $4.35 million local annually.

These allocations are based on the benefits from a locally driven levee maintenance program as well as existing law, which are summarized below.

- There are public benefits from Delta levee maintenance activities. Section 12981 of the California Water Code, which established the levees program, reflects the statewide interest in preserving the Delta in its present form including the protection of its assets such as agriculture, recreation, fisheries, and wildlife habitat. In addition, existing State law requires that there is a net habitat improvement from the levees maintenance and improvements programs. While there are public benefits from levee maintenance, traditionally the Federal government has not contributed to levee maintenance only levee improvements. There is general consensus among state, federal, and local interests that the maintenance program should remain locally driven (projects selected based on local interest/applications), and the federal government /USACE should not have a financial role.

- Local landowners clearly benefit from a locally driven maintenance program. Under existing law, the state-local cost share for maintenance is up to 75% state share and at least 25% local share, but historically the distribution has been closer to a 50-50 cost share due to limited state funding.

- While Delta export water users benefit from levee improvements on certain islands by increased protection of water supply and water quality, the levee maintenance program component is locally driven and focused on local flood protection benefits and, therefore, does not justify an export water user contribution.

- Contributions from boaters or other infrastructure beneficiaries are not included at this time, but may be considered through the comprehensive program evaluation, and proposed in the future.

Levee Improvements. At this time, it is premature to put forward an appropriate share of funding from state, federal, water users, and local districts for Delta levee improvements until the CPE is complete. However, the example allocation included in this Finance Plan shows strong intent to develop a broader revenue pool from beneficiaries in the future. Therefore, the following cost share is included as a "placeholder" for Delta levee improvements:

- Federal 65%
- State 15%

- Water user 15% (In-Delta, CVP exporters, SWP exporters) beginning in Year 8
- Local 5%, which could be provided by LERRDs (lands, easements, rights-of-way, relocations, and disposal areas).

For a $30 million annual Delta levee improvements program, the example allocation amounts to $19.5 million Federal, $4.5 million State, $4.5 million water users, and $1.5 million local. The water user contributions would begin in Year 8, after the CPE is complete. In the interim (Years 5–7), a status quo level of state, water user, and local funding will be continued, and additional federal funding from new authorization will be sought.

LERRDs may exceed the local cost share (5% of the project cost). To the extent LERRDs cover the non-Federal match for levee improvements (up to 35%), some portion of the State and water user share that is not needed to reach the 35% non-Federal cost share may be used to fund additional levee improvement projects with State and water user benefits.

The example allocation is based on the benefits from a Delta levee improvements program as well as existing federal cost sharing formulas, which are summarized below.

- The levee improvements program provides multiple benefits, including water quality, water supply reliability, and habitat restoration. Therefore, contributions would be expected from the public (State and Federal), export and in-delta water users, and local landowners, because they all benefit from the levee improvements program.

- The Federal/USACE share for flood control project improvements is traditionally 65%; and the nonfederal share is 35%. As part of the nonfederal share, local agencies are required to provide the LERRDs and often the ongoing cost of O&M.

- As a placeholder, this proposal assumes that federal appropriations (accounting for 65% of the annual needs for levee improvements) would be available beginning with Year 6. However, to the extent federal appropriations fall short of targets, state funding may be used to make up the difference for the public share. In addition, implementation of the levee improvements component will need to include a mixture of federally (USACE) managed improvements and state (DWR) managed improvements. This is because of the difference in state and federal project justification and rules, and the difference in method and schedule for implementation.

All Other Components

- Comprehensive Program Evaluation
  The CPE provides broad benefits based on the knowledge that will be gained from the evaluation and risk assessment. Therefore, the costs are allocated 100% to the public. Because the CPE is a high priority and federal funding is not likely to be available in the near-term, the costs are allocated 100% to the State, primarily from Proposition 50 funding.

- Research, Studies, Oversight, and Coordination
  These activities provide broad public benefits. Therefore, the costs are allocated 100% to the public. The federal/state cost share is based on cost estimates from the USACE and DWR to complete the activities that each plans to fund under this category.

ALLOCATION BY PERCENT

PROGRAM COMMONENTS	STATE	FED	WATER USER	LOCAL MATCH
Levee Maintenance				
Construction	75%	—	—	25%
Local Deductible ($1,000/mile)	—	—	—	100%
Staff and Operations	100%	—	—	—
Levee Improvements	15%	65%	15%	5%
All Other Components (Comprehensive Evaluation, Studies/Research, and Oversight and Coordination)	49%	51%	—	—
Total % Allocation	**42%**	**39%**	**7%**	**12%**

FINANCE PLAN: SUISUN MARSH LEVEES

Funding allocations are not proposed at this time for the Suisun Marsh Levees component. Environmental documentation and a Suisun Marsh Plan are under development and should be finished in 2006. Therefore, the Suisun Marsh levees are not included in the table at the end of this section. However, with the assistance of BDA and review from the public, such as the Levees & Habitat Subcommittee of the Bay-Delta Public Advisory Committee, a benefits-based cost allocation evaluation, scheduled to be completed by June 2005, will propose cost allocations for the Suisun Marsh levees. By the end of 2005, the Levees Finance Plan will be revisited and adjusted to include a preliminary allocation for the Suisun Marsh Levees based on the beneficiary cost allocation evaluation. In Year 7, when the Suisun Marsh Plan is complete, the Suisun Marsh Finance Plan funding targets and allocations will be revisited to make any adjustments needed to achieve the Suisun Marsh Plan objectives.

Levees Program: Suisun Marsh Levees Component 10-Year Funding Targets ($ in millions)				
Program Year	**Levee Maintenance**	**Levee Improvements**	**Supporting Components**	**TOTAL**
Year 5	$0.2	$0.1	$1.0	$1.3
Year 6	$0.5	$1.0	$1.0	$2.5
Year 7	$2.0	$3.0	$1.5	$6.5
Year 8	$2.5	$3.5	$1.5	$7.5
Year 9	$2.5	$4.5	$1.5	$8.5
Year 10	$2.5	$4.5	$2.0	$9.0
Year 11	$2.5	$4.5	$2.0	$9.0
Year 12	$2.5	$3.0	$1.5	$7.0
Year 13	$1.5	$3.0	$1.5	$6.0
Year 14	$1.5	$3.0	$1.5	$6.0
TOTAL	**$18.2**	**$30.1**	**$15.0**	**$63.3**

SUISUN MARSH LEVEES FUNDING TARGETS

The annual funding targets for each of the components of the Suisun Marsh Levees are described below.

Levee Maintenance. $2.5 million. This funding target begins in Year 8. About $200,000 is needed for Year 5 and $500,000 for Year 6 for the Suisun Marsh Levee maintenance, with the funding target increasing to $2 million per year for Year 7, then increasing to $2.5 million in Year 8. As maintenance is funded and completed along with levee improvements as scheduled (see table below), funding needs will decrease to $1.5 million beginning in Year 13. The long-term annual costs are expected to decrease as the Suisun Marsh Levee Improvements component is implemented and tidal restoration goals for the Suisun Marsh are met.

Levee Improvements. $4.5 million. This funding target begins in Year 9. $100,000 is needed in Year 5 and $1 million in Year 6, with the funding increasing significantly to $3 million in Year 7, after completion of the Suisun Marsh Plan.

All Other Components. $1.5 million. This funding target fluctuates between $1–2 million over the 10-year period, with an average annual need of $1.5 million.

SUISUN MARSH LEVEES FUNDING STRATEGY

The following near-term strategy is proposed for those Suisun Marsh levees that are not currently covered under the existing DWR or DFG levee programs:

Levee Maintenance. For Year 5, all levee maintenance expenses will be locally funded. For Year 6, levee maintenance expenses are expected to be cost shared with up to 75% State, and no less than 25% local funds. $500,000 is needed in Year 6, with up to $375,000 from the State, and not less than $125,000 million from local matching funds. Potential State funding sources are Proposition 50, Chapter 7(c) from the Levees Program, or Proposition 50, Chapter 7(e) from the Ecosystem Restoration Program.

Levee Improvements & Supporting Components. The Suisun Marsh Levee Improvements Program is expected to provide multiple benefits, such as flood protection, water quality, ecosystem restoration, and water supply reliability. At this time, however, it is premature to put forward an appropriate share of funding from state, federal, water users, and local districts for Suisun Marsh Levee Improvements or supporting components. With the assistance of CBDA and their consultants, and periodic review from the public, such as the Levees & Habitat Subcommittee of the Bay-Delta Public Advisory Committee, a beneficiary cost allocation evaluation will be completed by June 2005 that will propose allocations for Suisun Marsh levee improvements and supporting components.

PERIODIC REVIEW

Periodic review of program objectives, funding targets, and program effectiveness is expected for the Levees Program, particularly given future uncertainties and additional information expected from new legislation, federal appropriations, the Comprehensive Program Evaluation, and the

Suisun Marsh Plan. The first periodic review is expected by June 2005, when funding targets and allocations will be included for the Suisun Marsh Levees.

ISSUES

Boaters and Other Beneficiaries. Some stakeholders have raised the issue that boaters and infrastructure beneficiaries, such as PG&E or the railroad, should contribute funding for the Delta levee maintenance activities. While no allocation is proposed to boaters or infrastructure beneficiaries (except what is currently paid as part of the local levee assessment) at this time, this idea will be explored when more information is available from the Comprehensive Program Evaluation.

Federal Participation. Federal legislation recently signed by the President provides new authorization for the USACE to participate in the levee program. While the federal participation is welcomed, there is concern by some local reclamation districts and water users that the USACE process and schedule will cause delays and increase costs.

Water User Share. Export water users have expressed concern with a placeholder allocation shown in the Finance Plan given the uncertainty of the allocation. CVP and SWP contractors have indicated that they would not be willing to pay for any levee improvements until a CPE is in place.

Levees Program: Delta Levees Component — Allocation Summary by Year ($ in millions)

Program Year	Funding Targets [1]	Available Fund Sources					Additional Funding for Unmet Needs [3]					
		State		Federal	Local Match	Total Available Funding	Unmet Needs	State	Federal [4]	Export (SWP/CVP) & In-Delta Water Users	Local Match	Total Additional Funding
		General Fund	Prop 50 [2]									
Year 5	**$25.9**	$0.01	$21.0	$0.2	$3.4	**$24.6**	$1.3	$0.0	$0.5	$0.3	$0.5	**$1.3**
Year 6	**$35.4**	$0.01	$18.4		$3.4	**$21.8**	$13.6	$0.0	$12.8	$0.3	$0.5	**$13.6**
Year 7	**$35.0**	$0.01	$1.1			**$1.1**	$34.0	$17.0	$12.8	$0.3	$3.9	**$34.0**
Year 8	**$50.0**	$0.01				**$0.01**	$50.0	$18.4	$21.3	$4.5	$5.9	**$50.0**
Year 9	**$50.0**	$0.01				**$0.01**	$50.0	$18.4	$21.3	$4.5	$5.9	**$50.0**
Year 10	**$50.0**	$0.01				**$0.01**	$50.0	$18.4	$21.3	$4.5	$5.9	**$50.0**
Year 11	**$50.0**	$0.01				**$0.01**	$50.0	$18.4	$21.3	$4.5	$5.9	**$50.0**
Year 12	**$50.0**	$0.01				**$0.01**	$50.0	$18.4	$21.3	$4.5	$5.9	**$50.0**
Year 13	**$50.0**	$0.01				**$0.01**	$50.0	$18.4	$21.3	$4.5	$5.9	**$50.0**
Year 14	**$50.0**	$0.01				**$0.01**	$50.0	$18.4	$21.3	$4.5	$5.9	**$50.0**
TOTAL	**$446.4**	**$0.1**	**$40.5**	**$0.2**	**$6.8**	**$47.6**	**$398.9**	**$145.4**	**$175.2**	**$32.4**	**$45.8**	**$398.9**

Levees Program: Delta Levees Component — Allocation by Dollars ($ in millions)

Program Year	Funding Targets [1]	Available Fund Sources					Additional Funding for Unmet Needs [3]					
		State		Federal	Local Match	Total Available Funding	Unmet Needs	State	Federal [4]	Export (SWP/CVP) & In-Delta Water Users	Local Match	Total Additional Funding
		General Fund	Prop 50 [2]									
Levee Maintenance [5]												
Year 5	**$13.1**		$9.7		$3.4	**$13.1**						
Year 6	**$13.1**		$9.7		$3.4	**$13.1**						
Year 7	**$13.1**					**$0.0**	$13.1	$9.7			$3.4	**$13.1**
Year 8	**$17.0**					**$0.0**	$17.0	$12.7			$4.4	**$17.0**
Year 9	**$17.0**					**$0.0**	$17.0	$12.7			$4.4	**$17.0**
Year 10	**$17.0**					**$0.0**	$17.0	$12.7			$4.4	**$17.0**
Year 11	**$17.0**					**$0.0**	$17.0	$12.7			$4.4	**$17.0**
Year 12	**$17.0**					**$0.0**	$17.0	$12.7			$4.4	**$17.0**
Year 13	**$17.0**					**$0.0**	$17.0	$12.7			$4.4	**$17.0**
Year 14	**$17.0**					**$0.0**	$17.0	$12.7			$4.4	**$17.0**
Subtotal	**$158.3**	**$0.0**	**$19.5**	**$0.0**	**$6.8**	**$26.2**	**$132.1**	**$98.3**	**$0.0**	**$0.0**	**$33.8**	**$132.1**
Levee Improvements [6]												
Year 5	**$12.0**		$10.7			**$10.7**	$1.3		$0.5	$0.3	$0.5	**$1.3**
Year 6	**$17.0**		$5.2			**$5.2**	$11.8		$11.0	$0.3	$0.5	**$11.8**
Year 7	**$17.0**		$1.1			**$1.1**	$16.0	$4.2	$11.0	$0.3	$0.5	**$16.0**
Year 8	**$30.0**					**$0.0**	$30.0	$4.5	$19.5	$4.5	$1.5	**$30.0**
Year 9	**$30.0**					**$0.0**	$30.0	$4.5	$19.5	$4.5	$1.5	**$30.0**
Year 10	**$30.0**					**$0.0**	$30.0	$4.5	$19.5	$4.5	$1.5	**$30.0**
Year 11	**$30.0**					**$0.0**	$30.0	$4.5	$19.5	$4.5	$1.5	**$30.0**
Year 12	**$30.0**					**$0.0**	$30.0	$4.5	$19.5	$4.5	$1.5	**$30.0**
Year 13	**$30.0**					**$0.0**	$30.0	$4.5	$19.5	$4.5	$1.5	**$30.0**
Year 14	**$30.0**					**$0.0**	$30.0	$4.5	$19.5	$4.5	$1.5	**$30.0**
Subtotal	**$256.0**	**$0.0**	**$17.0**	**$0.0**	**$0.0**	**$17.0**	**$239.1**	**$35.7**	**$159.0**	**$32.4**	**$12.0**	**$239.1**
All Other Components (Studies/Research, Oversight & Coordination) [7]												
Year 5	**$0.8**	$0.01	$0.6	$0.2		**$0.8**	$0.0					**$0.0**
Year 6	**$5.3**	$0.01	$3.5			**$3.5**	$1.8		$1.8			**$1.8**
Year 7	**$4.9**	$0.01				**$0.01**	$4.9	$3.1	$1.8			**$4.9**
Year 8	**$3.0**	$0.01				**$0.01**	$3.0	$1.2	$1.8			**$3.0**
Year 9	**$3.0**	$0.01				**$0.01**	$3.0	$1.2	$1.8			**$3.0**
Year 10	**$3.0**	$0.01				**$0.01**	$3.0	$1.2	$1.8			**$3.0**
Year 11	**$3.0**	$0.01				**$0.01**	$3.0	$1.2	$1.8			**$3.0**
Year 12	**$3.0**	$0.01				**$0.01**	$3.0	$1.2	$1.8			**$3.0**
Year 13	**$3.0**	$0.01				**$0.01**	$3.0	$1.2	$1.8			**$3.0**
Year 14	**$3.0**	$0.01				**$0.01**	$3.0	$1.2	$1.8			**$3.0**
Subtotal	**$32.1**	**$0.1**	**$4.1**	**$0.2**	**$0.0**	**$4.4**	**$27.7**	**$11.5**	**$16.2**	**$0.0**	**$0.0**	**$27.7**
TOTAL	**$446.4**	**$0.1**	**$40.5**	**$0.2**	**$6.8**	**$47.6**	**$398.9**	**$145.4**	**$175.2**	**$32.4**	**$45.8**	**$398.9**

1. The funding targets reflect a status quo program for Years 5-7 while the comprehensive program evaluation is ongoing. The funding targets for levee improvements reflect federal funding ($90 million) from new authorization that is available from 2005-2010.

2. $40.5 million remains from Prop 50 for Year 5 and beyond. The actual timing of bond approval and issuance may differ.

3. This table includes an example allocation for Years 8-14. Any allocations shown for Years 8-14 are subject to review and change upon completion of the comprehensive program evaluation, when a check-in will be needed for the 10-year finance plan for the Levees Program.

4. Additional federal funding for Year 5 is based on the need to develop a report for congress detailing projects and funding needs from the new federal authorization. No funding is currently allocated in the President's Budget, but the Delta Levees Subcommittee was concerned that waiting until Year 6 to start this report would cause delays in implementation of federal appropriations. Funding for Years 6-10 is based on authorization of $90 million proportioned over FY 2005-2010, and subject to future appropriations and availability of funds. Estimates for Years 11-14 are based on future authorization and appropriation.

5. The local match for levee maintenance includes a deductible of $1,000/levee mile for approximately 600 miles of Delta Levees, or $0.6 million per year.

6. The local share for levee improvements may come from LEERDs (lands, easements, rights-of-way, relocations, and disposals). To the extent LEERDs are sufficient to cover the non-Federal match, additional State and water user funding that would no longer be needed as a non-Federal match may be available to fund additional levee improvement projects.

7. All Other components includes oversight & coordination, subsidence control plan, emergency response, and beneficial reuse of dredge material. The comprehensive program evaluation (including a risk assessment) is included for Years 5-7.

STORAGE

BACKGROUND AND FUNDING HISTORY

The goal of the Storage Program is to expand storage capacity to increase system operational flexibility, improve water supply reliability and water quality, and support ecosystem restoration efforts including specifically fish restoration. The program is investigating five potential surface storage projects and is funding a program to expand groundwater storage and conjunctive use. In addition, the San Luis Reservoir Low Point Improvement Project (LPIP) is included in this funding proposal. The San Luis LPIP is designed to improve both water quality and water supply from the existing San Luis Reservoir.[19]

A total of over $365 million has been spent on the program during the four-year period 2000–2004: about $61 million on the surface storage investigations, over $290 million on the groundwater storage program[20], and $13.6 million on the San Luis LPIP investigation. In addition, over $700 million in local cost shares has been spent or obligated for groundwater storage projects. The groundwater storage program includes feasibility study grants, technical assistance, and storage and recharge implementation grants and loans.

FINANCE PLAN

Over the next 10 years the Storage Program will continue to fund surface storage investigations and various groundwater storage activities, including studies, technical assistance, and implementation projects.

1) GROUNDWATER STORAGE/CONJUNCTIVE USE

FUNDING TARGETS

The Finance Plan funding target for the groundwater storage/conjunctive use component is $1 billion over the next 10 years.

The groundwater component has funded development of groundwater storage and conjunctive use projects through 2004. These projects are currently being monitored to determine the long-term increase in storage and new yield that they are providing. A similar amount of additional storage and yield from groundwater projects over the next 10 years is expected. To achieve this yield and storage, the Finance Plan calls for $1 billion of funding. The $1 billion dollar funding target is a projection based on preliminary estimates of the effectiveness from Years 1–4 of the program. Implementing agencies will continue to evaluate the performance of already funded projects and to improve estimates of the costs and cost-effectiveness of potential projects.

The total funding target is spread evenly over the planning period, with the exception that Year 5 funding is based on existing available funds, including local contributions. The even distribution of funding target is an assumption for planning purposes; actual expenditures are expected to vary from year to year based on actual revenue patterns and the timing of grant programs and other programs. Initial years of funding would be from available funds expected from Proposition 50.

AVAILABLE FUNDING

Available funds total $124.8 million, and include:

- Federal public share: None identified
- State public share: $31.2 million is available from Proposition 50, spread across Years 5–6.[21]
- Local users' share of $93.6 million is estimated to be available in Years 5 and 6, to match grants provided from Proposition 50.

Additional funding of $875.2 million over the 10-year period is needed.

FUNDING STRATEGY

The Finance Plan allocates groundwater storage/conjunctive use program costs as follows: State: 25%, Local project sponsors: 75%.

In the near-term (Year 6) there are unmet funding needs which are made-up in Year 7 when new State funding is scheduled to begin. The 25/75% allocation is based on the following considerations:

- Cost shares will be based on the expected distribution of local and statewide benefits and will vary from project to project. These cost shares will be determined through competitive proposal solicitation processes for each funding year. A fixed cost share for projects is not proposed. However, on average it is expected that local project sponsors will cover 75% of project costs.
- The average cost shares approximate the observed cost shares of recent groundwater storage grant programs funded through Proposition 13. The 75% local share applies as an average match to both the available state funding in Years 5–6 and to all proposed state and federal funding. A public cost share is

19. The San Luis Reservoir Low Point Improvement Project (LPIP) was previously included as a component of the Conveyance Program, but has been shifted to the Storage Program for purposes of developing the plan to finance its study. The LPIP was previously being considered as part of a broad package of Delta improvements, and thus was included in the conveyance program. At this time, it is expected that the LPIP would provide both storage and water quality benefits.

20. This includes $79 million in Proposition 13 funds that have not yet been formally obligated for projects.

21. Available funds are estimates of how much money from Proposition 50 will be used for groundwater storage activities and projects. The total assumes that money is available from Chapter 7, paragraph d and from Chapter 8. It includes money planned to support groundwater storage projects and groundwater management activities under AB 303.

justified because groundwater/conjunctive use projects provide broad regional benefits, including water supply and water quality benefits, and may reduce current or future demands on the Delta. The assumed 75% local cost share reflects recent projects funded by the program plus other cost-effective projects that were not funded due to constraints on available grant funds. Some have questioned the need to provide a public share for locally cost-effective projects. However, public funding is justified in cases of broad regional benefits, direct or indirect benefits to the Bay-Delta system, and local implementation difficulties (e.g. financial constraints or interjurisdictional conflicts).

- The public share is allocated to the State because at this time the federal government does not have broad authorization for a groundwater financial assistance program.[22] Reclamation indicates that its existing, ongoing authority is limited to technical assistance and appraisal-level studies. Future federal authorization should be sought because many conjunctive use projects have broad public (State and federal) benefits for demonstration and technology development, and they can provide direct or indirect benefits for the Bay-Delta system.

Remaining funding needs for groundwater storage are met with three sources of funds:

- State funding of $217.9 million, to be used in Years 7–14.
- Federal funding of $900,000, to be used in Years 6–14.
- Local funding of $656.4 million, representing the 75% local cost share.

2) SURFACE STORAGE

Planning Studies for Original 5 Surface Storage Investigations and San Luis Reservoir Low Point Improvement Project Investigation

FUNDING TARGETS

Planning studies are continuing for up to five projects originally under investigation (listed below). It is expected that one or more of the five projects may be removed from consideration based on study results. As a result the projected 10-year costs for the Storage Program would be reduced. At present, however, all five studies are continuing, and costs for all studies are included below. The San Luis Reservoir Low Point Improvement Project Investigation is also planned to continue through Years 5 and 6. A total of $81.7 million is needed to complete planning studies:

- $14.3 million for North of Delta Offstream Storage
- $10.4 million for Shasta Lake Enlargement
- $5.5 million for In-Delta Storage Investigation
- $20.9 million for Los Vaqueros Expansion
- $13.2 million for Upper San Joaquin Storage Investigation
- $17.4 million for the San Luis Reservoir Low Point Improvement Investigation (San Luis LPIP)

Many of these studies are planned for completion within the next three years, so the majority of the funding is needed during years 5–7; otherwise the studies will be delayed.

AVAILABLE FUNDING

The 2005 federal budget includes $2 million for continued surface storage investigations.[23] An additional $29.8 million is estimated available from Proposition 50 bond proceeds to support surface storage investigations. No funding is currently available for the San Luis LPIP study.[24]

These sources leave $50.5 million of unmet need. The funding targets, available funding, and unmet needs for the planning studies are summarized in the table below.

22. CBDA supports the increase of federal authorization and funding of groundwater storage. If such funding becomes available, CBDA would support up to one-half of the public share of the groundwater program cost being contributed from federal sources.

23. An additional $500,000 has been appropriated for CVP Yield increase studies. This amount is not tied to any of the specific storage investigations discussed here, so only $100,000 is included as available funds for Oversight and Coordination.

24. Some previously budgeted money may be unspent as yet, but it is not included in either the funding target or the available funds.

Summary of 10-Year Funding Targets & Unmet Needs
Storage Program Planning Studies ($ in millions)

Program Component	Funding Targets [1]	Available Fund Sources			Total Available Funds	Unmet Needs
		State		Federal		
		General Fund	Prop 50			
North-of-the-Delta Offstream Storage	**$14.3**		$10.7	$0.5	**$11.2**	**$3.1**
Shasta Lake Enlargement	**$10.4**		$0.5	$0.5	**$1.0**	**$9.4**
In-Delta Storage Investigations	**$5.5**		$5.5		**$5.5**	**$0.0**
Los Vaqueros Reservoir Expansion	**$20.9**		$10.0	$0.5	**$10.5**	**$10.4**
Upper San Joaquin Storage Investigations	**$13.2**		$2.5	$0.5	**$3.0**	**$10.2**
San Luis Reservoir LPIP	**$17.4**				**$0.0**	**$17.4**
TOTAL	**$81.7**	**$0.0**	**$29.2**	**$2.0**	**$31.2**	**$50.5**

1. Total remaining funding needed over the 10-year Plan.

FUNDING STRATEGY

Original surface storage planning studies: Two efforts are currently underway that are likely to affect the funding needs and the and the financing for the all surface storage investigations except San Luis LPIP.

Re-evaluate study costs. A process is currently underway (the Common Assumptions process) to develop information about the five surface storage projects. Results will allow the projects' performance, costs, and benefits to be compared using a consistent approach, and will inform decisions about project priorities. Results of this effort, along with the information developed in the plan formulation and feasibility studies, may result in one or more of the projects being removed from further consideration. Information from this process is expected in 2005.

Local participants. In addition, Department of Water Resources and U.S. Bureau of Reclamation are in the process of working with local areas and water users to identify if there are interested local participants for each project. This will help to identify which projects have the greatest local interest and possible willingness to pay for project costs. This effort should be completed in early 2005.

Until the implementing agencies complete their review on project costs and local interest to determine if some or all of the studies will be completed, it is not know if there will be a need for additional funding or not. Current available funding is not sufficient to complete all five studies. Continued funding of the planning studies is important for sustaining progress in the storage program and maintaining balance across CALFED programs. If additional funding is needed , state and federal budget constraints could hinder the timely completion of the studies. State funding is scheduled to be available Year 7 at the soonest, whereas much of the funding for the planning studies is needed during years 5–7.

While local funding will be sought for the planning studies, at this time the project beneficiaries have not been identified and a specific water user allocation for the planning studies can not be proposed. Therefore this Plan includes a default allocation to public funding (roughly divided 50-50 between state and federal) However, planning study costs for surface storage projects that move to construction will be recovered from project beneficiaries. Therefore, the ultimate cost allocation for surface storage planning studies could differ from the one in the Finance Plan.

The following funding strategy is put forward:

- Include 100% state and federal funding in Finance Plan as a default allocation.
- Pursue water user contributions for the planning studies. Water users that could benefit from storage projects may be able and willing to provide some funding to maintain progress on the planning studies. SWP contractors, CVP contractors, and other water users could be willing to help fund studies.
- Pursue additional State and federal appropriations. Appropriations are difficult to garner, especially from the State, but could be used to augment local water user funds or federal funds.

SAN LUIS RESERVOIR LPIP

The Finance Plan allocates the remaining study costs to the federal government (non-reimbursable 50%) and CVP water users (reimbursable 50%).[25] The federal authorization bill for the CALFED Program authorizes federal funding for feasibility, evaluation and implementation of the San Luis project. A total of $184 million is authorized for multiple activities but the amount per project is not specified. Federal money is not expected to be available to support Year 5 needs, so a delay in funding is shown that is made up with Federal funding available in Year 6.

This project is expected to primarily benefit CVP and federal taxpayers; but the allocation should be revisited after feasibility and planning studies are complete. Reclamation is currently preparing an appraisal report to determine its interest in further study of the project, which could provide up to 50% of the remaining costs of the study. CVP is developing a proposed funding strategy for sharing the costs of this planning study between the CVP, other water users and the federal government. Spending to date has been primarily from the State (Proposition 13).

3) OVERSIGHT AND COORDINATION

All costs are assigned to the state. Costs will be covered initially with State General Fund and subsequently from other new state funding if it becomes available.

25. Although initial funding of some or all of the planning costs is born by federal public, such costs may eventually be reimbursed by beneficiaries if the project is constructed. The CVP has a cost allocation process to determine how project costs are to be allocated and reimbursed among beneficiaries. Some or all of the planning costs of a constructed project could be allocated to and reimbursed by CVP contractors.

ALLOCATION BY PERCENT

PROGRAM COMPONENTS	STATE	FED	WATER USERS	LOCAL MATCH
Groundwater Storage / Conjunctive Water Management Program	24.9%	0.1%	—	75%
North-of-the-Delta Offstream Storage	90.5%	9.5%	—	—
Shasta Lake Enlargement	11.5%	88.5%	—	—
In-Delta Storage Investigations	100%	—	—	—
Los Vaqueros Reservoir Expansion	68.4%	31.6%	—	—
Upper San Joaquin Storage Investigations	31.4%	68.6%	—	—
San Luis Reservoir LPIP - Planning	—	50%	50%	—
Oversight and Coordination	98.1%	1.9%	—	—
Total % Allocation	**27%**	**3%**	**0.8%**	**69%**

PERIODIC REVIEW

For the groundwater component: Periodic review of program objectives, funding targets, and program effectiveness is warranted, both for potential revisions to funding targets and for longer-term planning beyond the 10-year Plan's horizon. In addition, future decisions about other CALFED programs such as surface storage can affect the benefits and costs of groundwater storage and conjunctive use projects. Implementing agencies will continue to evaluate the performance of already funded projects and to improve estimates of the costs and cost-effectiveness of potential projects. A status report to BDA is expected by the end of 2005.

For the surface storage component: Agencies and stakeholders agree that not all of the surface storage planning studies may be carried to completion. Hydrologic, environmental, and economic analyses are expected to provide information on which to base a decision about which studies should move to the next phase and potentially to project construction. Study cost estimates will also be assessed and revised as more information is gained. The implementing agencies will be providing a status report to BDA on project feasibility in 2005.

POTENTIAL CAPITAL PROJECTS: SURFACE STORAGE CONSTRUCTION

One or more of the surface storage studies could lead to project construction. This Plan does not include funding targets or propose financing tools or an allocation of potential construction costs for the surface storage projects because no decision has been made on whether any of these projects will proceed to construction. If construction of a surface storage project were to be recommended, a benefits-based approach for allocating costs should be followed as described in the Draft Finance Options Report, and given broad public review. Beneficiaries could include water users, power users, recreation, general public, and any other group identified as benefiting from a storage project. Likely financing tools would be State Revenue Bonds which would be repaid by the water and power user beneficiaries. General Obligation Bonds that are repaid by the general taxpayers through the General Fund could be used to pay the public share pf any public benefits associates with the projects.

The table below summarizes the preliminary estimates of construction costs for the five original surface storage projects and for the San Luis LPIP.[26] These estimates do not include annual operations costs and may not be strictly comparable across projects. The Common Assumptions process currently underway is designed to create a common set of analytical approaches and information on which to compare the projects' potential performance and costs. Therefore, the cost estimates shown below provide only a rough comparison of the relative magnitude and timing of construction costs for the projects if they are built.

26. San Luis LPIP studies are also considering alternatives that would rely on operational changes rather than on large capital improvements.

Construction Cost Estimates for Potential Capital Projects — Surface Storage 10-Year Funding Targets (2003 $ in millions)

Program Years	North-of-Delta Offstream Storage	Shasta Lake Enlargement	In-Delta Storage	Los Vaqueros Expansion	Upper San Joaquin Storage	San Luis Reservoir Low Point Improvement
Year 5						
Year 6						$12.90
Year 7			$5.00			$34.00
Year 8	$60.00		$105.00			$61.50
Year 9	$130.00		$162.00	$95.00		$111.60
Year 10	$360.00		$126.00	$240.00		$114.20
Year 11	$360.00	$14.00	$126.00	$250.00	$30.00	$114.20
Year 12	$360.00	$14.00	$125.00	$250.00	$30.00	$113.80
Year 13	$360.00	$100.00	$125.00	$250.00	$30.00	$6.60
Year 14	$370.00	$100.00			$130.00	$6.60
10-Year Total	**$2,000.00**	**$228.00**	**$774.00**	**$1,085.00**	**$220.00**	**$575.40**
Total, Year 5 to Completion	**$2,000.00**	**$428.00**	**$774.00**	**$1,085.00**	**$740.00**	**$575.40**

Storage Program — Allocation Summary by Year ($ in millions)

Program Year	Funding Targets [1]	Available Funding					Additional Funding for Unmet Needs					
		State		Federal[3]	Local Match[4]	Total Available Funding	Unmet Needs	State[5]	Federal[5]	Water Users	Local Match[7]	Total Additional Funding
		General Fund	Prop 50[2]							CVP[6]		
Year 5	**$91.2**	$0.3	$34.2	$2.1	$46.8	**$83.4**	$7.8	$0.0	$0.0			**$0.0**
Year 6	**$137.7**		$26.6		$46.8	**$73.4**	$64.3	$0.2	$19.9	$8.7	$0.3	**$29.0**
Year 7	**$121.7**		$1.7			**$1.7**	$120.0	$44.3	$9.4		$109.2	**$162.9**
Year 8	**$108.6**		$0.3			**$0.3**	$108.3	$26.9	$3.2		$78.1	**$108.3**
Year 9	**$105.0**		$0.2			**$0.2**	$104.8	$26.4	$0.5		$78.1	**$105.0**
Year 10	**$104.8**					**$0.0**	$104.8	$26.4	$0.4		$78.1	**$104.9**
Year 11	**$104.4**					**$0.0**	$104.4	$26.2	$0.1		$78.1	**$104.4**
Year 12	**$104.4**					**$0.0**	$104.4	$26.2	$0.1		$78.1	**$104.4**
Year 13	**$104.4**					**$0.0**	$104.4	$26.2	$0.1		$78.1	**$104.4**
Year 14	**$104.4**					**$0.0**	$104.4	$26.2	$0.1		$78.1	**$104.4**
TOTAL	**$1,087.0**	**$0.3**	**$63.0**	**$2.1**	**$93.6**	**$159.0**	**$928.0**	**$229.1**	**$33.8**	**$8.7**	**$656.4**	**$928.0**

[1] The pattern of desired funding for groundwater storage is assumed constant from years 6-14, though new bond funding cycles are likely to influence the actual spending pattern. Assumes all planning studies currently underway will be completed. May include some money budgeted for previous years but not yet spent.

[2] Includes existing Prop 50 funds identified for planning studies and estimated funding of groundwater storage projects and programs from Chapters 7(section d) and 8 of Proposition 50.

[3] $0.5 million has been appropriated for CVP Yield increase studies. This amount is not tied to any of the specific storage investigations discussed here, so only $0.1 is included as available funds for Oversight and Coordination.

[4] Local cost share expected to be associated with Prop 50 bond funding.

[5] Assumes Year 1-4 funding pattern continues for surface storage investigations. Note that the state funding is unlikely to occur until Year 7 when new statewide bond funding is available. This will result in delays in completing the studies, particularly those with significant state participation. Some planning costs may be reimbursed by water users and other beneficiaries if projects are constructed. The federal share for groundwater storage is limited to $100,000 per year for technical assistance and appraisal-level studies.

[6] Assumed cost share for San Luis Low Point Improvement project.

[7] Assumes a 75% local cost share for Groundwater Storage in years 7-14.

Storage Program — Allocation by Dollars ($ in millions)

Program Year	Funding Targets [1]	Available Funding					Additional Funding for Unmet Needs					
		State		Federal[3]	Local Match[4]	Total Available Funding	Unmet Needs	State[5]	Federal[5]	Water Users	Local Match[7]	Total Additional Funding
		General Fund	Prop 50[2]							CVP[6]		
Groundwater Storage/Conjunctive Water Management Program												
Year 5	$62.4		$15.6		$46.8	$62.4						$0.0
Year 6	$104.2		$15.6		$46.8	$62.4	$41.8		$0.1		$0.3	$0.4
Year 7	$104.2					$0.0	$104.2	$36.3	$0.1		$109.2	$145.6
Year 8	$104.2					$0.0	$104.2	$25.9	$0.1		$78.1	$104.2
Year 9	$104.2					$0.0	$104.2	$25.9	$0.1		$78.1	$104.2
Year 10	$104.2					$0.0	$104.2	$25.9	$0.1		$78.1	$104.2
Year 11	$104.2					$0.0	$104.2	$25.9	$0.1		$78.1	$104.2
Year 12	$104.2					$0.0	$104.2	$25.9	$0.1		$78.1	$104.2
Year 13	$104.2					$0.0	$104.2	$25.9	$0.1		$78.1	$104.2
Year 14	$104.2					$0.0	$104.2	$25.9	$0.1		$78.1	$104.2
Subtotal	$1,000.0	$0.0	$31.2	$0.0	$93.6	$124.8	$875.2	$217.9	$0.9	$0.0	$656.4	$875.2
North-of-the-Delta Offstream Storage												
Year 5	$7.0		$6.2	$0.5		$6.7	$0.3					$0.0
Year 6	$3.8		$3.3			$3.3	$0.5		$0.5			$0.5
Year 7	$3.5		$1.2			$1.2	$2.3	$2.2	$0.4			$2.6
Year 8						$0.0						$0.0
Subtotal	$14.3	$0.0	$10.7	$0.5	$0.0	$11.2	$3.1	$2.2	$0.9	$0.0	$0.0	$3.1
Shasta Lake Enlargement												
Year 5	$0.6			$0.5		$0.5	$0.1					$0.0
Year 6	$4.1		$0.2			$0.2	$3.9		$3.7			$3.7
Year 7	$3.5		$0.1			$0.1	$3.4	$0.4	$3.1			$3.5
Year 8	$1.7		$0.1			$0.1	$1.6	$0.1	$1.5			$1.6
Year 9	$0.3		$0.1			$0.1	$0.2	$0.1	$0.2			$0.3
Year 10	$0.2					$0.0	$0.2	$0.1	$0.2			$0.3
Subtotal	$10.4	$0.0	$0.5	$0.5	$0.0	$1.0	$9.4	$0.7	$8.7	$0.0	$0.0	$9.4
In-Delta Storage Investigations												
Year 5	$3.5		$3.5			$3.5						$0.0
Year 6	$2.0		$2.0			$2.0						$0.0
Subtotal	$5.5	$0.0	$5.5	$0.0	$0.0	$5.5	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Los Vaqueros Reservoir Expansion												
Year 5	$7.0		$6.5	$0.5		$7.0						$0.0
Year 6	$7.3		$3.3			$3.3	$4.0		$3.2			$3.2
Year 7	$6.1		$0.2			$0.2	$5.9	$4.0	$2.7			$6.7
Year 8	$0.5					$0.0	$0.5	$0.3	$0.2			$0.5
Subtotal	$20.9	$0.0	$10.0	$0.5	$0.0	$10.5	$10.4	$4.3	$6.1	$0.0	$0.0	$10.4
Upper San Joaquin Storage Investigations												
Year 5	$1.5		$1.0	$0.5		$1.5	$0.0					$0.0
Year 6	$5.0		$1.0			$1.0	$4.0		$3.7			$3.7
Year 7	$4.2		$0.2			$0.2	$4.0	$1.2	$3.1			$4.3
Year 8	$2.0		$0.2			$0.2	$1.8	$0.3	$1.4			$1.8
Year 9	$0.3		$0.1			$0.1	$0.2	$0.1	$0.2			$0.3
Year 10	$0.2					$0.0	$0.2	$0.1	$0.1			$0.2
Subtotal	$13.2	$0.0	$2.5	$0.5	$0.0	$3.0	$10.2	$1.7	$8.6	$0.0	$0.0	$10.2
San Luis Reservoir Low Point Improvement - Planning												
Year 5	$7.4					$0.0	$7.4					$0.0
Year 6	$10.0					$0.0	$10.0		$8.7	$8.7		$17.4
Subtotal	$17.4	$0.0	$0.0	$0.0	$0.0	$0.0	$17.4	$0.0	$8.7	$8.7	$0.0	$17.4
Oversight and Coordination												
Year 5	$1.8	$0.3	$1.4	$0.1		$1.8						$0.0
Year 6	$1.4		$1.2			$1.2	$0.2	$0.2				$0.2
Year 7	$0.3					$0.0	$0.3	$0.3				$0.3
Year 8	$0.3					$0.0	$0.3	$0.3				$0.3
Year 9	$0.3					$0.0	$0.3	$0.3				$0.3
Year 10	$0.3					$0.0	$0.3	$0.3				$0.3
Year 11	$0.3					$0.0	$0.3	$0.3				$0.3
Year 12	$0.3					$0.0	$0.3	$0.3				$0.3
Year 13	$0.3					$0.0	$0.3	$0.3				$0.3
Year 14	$0.3					$0.0	$0.3	$0.3				$0.3
Subtotal	$5.3	$0.3	$2.6	$0.1	$0.0	$3.0	$2.3	$2.3	$0.0	$0.0	$0.0	$2.3
TOTAL	$1,087.0	$0.3	$63.0	$2.1	$93.6	$159.0	$928.0	$229.1	$33.8	$8.7	$656.4	$928.0

CONVEYANCE

BACKGROUND AND FUNDING HISTORY

The Conveyance Program includes planning and construction for 10 projects (see table at the end of this section). This Finance Plan addresses construction of three projects, and planning for the other seven. The Conveyance Program is considering construction of the other seven projects upon completion of planning, but at this point it is premature to develop benefit–based cost allocations until more information on costs and benefits is available. These potential capital projects include: Clifton Court Fish Screens, Tracy Fish Test Facility, Through Delta Facility, North Delta Flood Control & Ecosystem Restoration Project, and Lower San Joaquin Flood/Ecosystem Improvements. More information regarding these potential capital projects can be found below, in the Potential Capital Projects section.

Between 2000 and 2004, funding for the Conveyance Program has totaled approximately $110 million, broken down as follows:

- $46 million state—General Fund ($7.6 million), Proposition 13 ($37.6 million), and Proposition 50 ($600,000)
- $11 million federal—Water & Related Resources appropriations
- $46 million State Water Project (SWP) contractors
- $7 million Central Valley Project (CVP)contractors (through the CVPIA Restoration Fund)

The Conveyance Program is organized into the following components/projects:

1) Permanent Operable Barriers/8,500 cfs
2) Interim South Delta Actions
3) Delta Mendota Canal/California Aqueduct Intertie
4) Planning Studies
5) Oversight, Coordination, and Science

FINANCE PLAN

FUNDING TARGETS AND FUNDING STRATEGY

The funding targets, unmet needs, and recommendations for funding the unmet needs are organized below for each of the projects and planning studies contained in the Conveyance Program. The funding targets are based on state and federal staff planning estimates for each of the projects, assuming current schedules.

1) Permanent Operable Barriers/8,500 cfs. The preferred alternative of the South Delta Improvements Program (SDIP) includes four permanent operable barriers and increasing the pumping limit at the SWP Banks pumping plant to 8,500 cfs. This project is also a key component of the CALFED Delta Improvements Package (DIP), which is a high priority for the Program. The relative benefits of the permanent operable barriers/8,500 cfs are uncertain at this time, but benefits will generally include water supply improvements for SWP and CVP export water contractors, water quality improvements for the central Delta, fish protection, and the EWA from potential additional water supplies that current modeling studies show may be available for the EWA during the July-September period, at a lower cost.

Funding Target and Strategy

Since 2000, funding for planning has been almost entirely from State Water Contractors ($27 million). An additional $100 million is required to complete the permanent operable barriers and 8,500 cfs projects. Costs are broken down as follows:

- Planning ($13 million)—$8 million is available from State Water Contractors, leaving $5 million unmet.
- Construction ($87.1 million) for the four permanent operable barriers (this includes dredging, mitigation, and recreation). $53.2 million is available from Proposition 13, leaving $33.9 million still unmet.

The unmet needs for construction are allocated to the state to be paid out of Proposition 50 Chapter 7(b) funds. Federal funds will be pursued, and used to offset state costs to the extent they become available.[27] The primary beneficiaries of the permanent operable barriers are the SWP and CVP exporters (due to increased water supply capacity and pumping), Central Delta Water Agency (due to water quality benefits), the public (due to fish benefits), and the EWA (due to increased water supply). A benefits-based allocation would assign some construction costs to water user beneficiaries. However, this Finance Plan allocates all construction costs to the State because bond funding is eligible and available for this high priority and time sensitive project. Voter-approved public funding (Propo-

27. Existing law (CVPIA) includes a federal cost share for the permanent barriers. Three of the four barriers are included as a requirement in the CVPIA, although federal funding (taxpayer and CVP contractor) for planning for this project has been minimal. If federal funds are appropriated in time for construction of the permanent barriers so that the construction schedule is not delayed, then these funds should be used to help fund the remaining unmet needs for construction. However, any federal taxpayer share for this project is likely to not be available until Year 7, given the existing federal budget process. If state funding pays for a larger upfront share than required under CVPIA, then the Bureau of Reclamation (Reclamation) should apply a credit to the State for other State obligations under CVPIA.

sition 13) has been authorized to specifically pay for construction of this project ($53 million), and additional funds from Proposition 50/conveyance ($34 million) are also eligible for construction of this project. Remaining planning costs are allocated to the SWP. The SWP will fund the remaining $5 million for planning, given the uncertainty of CVP funding through the federal budget process, the high priority of this project, the need for this funding in the short-term, and the relative uncertainty associated with a CVP share for this project (taking into account their separate trade-offs with SWP through the CVP/SWP Project Integration Proposal).

2) Interim South Delta Actions. This activity includes the operation of the temporary barriers and related dredging in the South Delta until permanent barriers are constructed.

Funding Target and Strategy

The funding target for the Interim South Delta Actions is $24.7 million over four years. This assumes that CALFED will construct the permanent barriers by the end of 2007. The temporary barriers provide the same CVP and SWP benefits as the permanent barriers. Given the uncertainty surrounding CVP funding in the short-term, the SWP is scheduled to continue to cover the costs for interim South Delta actions. SWP and CVP contractors, with involvement from Reclamation and DWR, are proposing to negotiate a cost sharing arrangement in which any CVP reimbursement to the SWP would likely be through a wheeling fee.[28]

3) Delta Mendota Canal/California Aqueduct Intertie. The conveyance capacity of the Delta Mendota Canal (DMC) currently limits the full permitted capacity of the Tracy Pumping Plant to less than its full capacity of 4,600 cfs during non-irrigation periods. By creating an intertie between the DMC and the California Aqueduct, about 400 cfs could be moved from the DMC to the California Aqueduct, which would allow Tracy pumping at full capacity.

Funding Target and Strategy

The funding target for the Delta Mendota Canal/California Aqueduct Intertie is $26.7 million. CVP is the primary beneficiary of this project, although some CVP contractors believe there will also be benefits to the SWP. The Finance Plan allocates all costs to CVP contractors. If Reclamation determines a federal interest in this project, some of the federal appropriation for construction costs may be classified as non-reimbursable, in which case the share to CVP contractors would be reduced.

4) Planning Studies. There are numerous planning studies underway for the Conveyance Program, many of which have unmet funding needs. Should these projects move to construction, CVP and SWP water users are expected to be the primary beneficiaries.

South Delta Fish Protection Measures—The South Delta Fish Protection Measures include planning studies associated with Clifton Court Fish Screens (primarily for the South Delta Hydrodynamic Investigations and an analysis of the short-circuit alternative) and the fish collection, handling, transportation, and release (CHTR) processes study.

The funding target is $7.2 million. $4.2 million is for the South Delta hydrodynamic investigations, $2.3 million is for the planning and pre-feasibility of a short circuit alternative for the Clifton Court Fish Screens, and $700,000 is for the CHTR study. Existing funding is available for the short circuit alternative and the CHTR study, leaving unmet needs only for the hydrodynamic investigations.

Benefits from the South Delta hydrodynamic investigations are broad and are expected to accrue to SWP and CVP contractors and the public. $4.2 million is needed and $1.3 million is available from Proposition 13, leaving an unmet need of $2.9 million. Federal ($300,000) funds, Proposition 13 ($2.1 million), and Proposition 50 ($500,000) will be sought to cover the unmet needs . Any remaining unmet needs not covered by federal funds, Proposition 13, and Proposition 50 are to be funded by SWP and CVP contractors, with the cost share between them to be determined.

Tracy Fish Test Facility—This study involves research regarding fish protection measures that may benefit both the CVP and SWP. However, beneficiaries are uncertain, and the future status and need for this project is being reviewed by the South Delta Fish Facilities Forum. A recommendation from the Forum to the CALFED agencies will be made by the end of 2004 or early 2005. At this time, no additional funding or allocation is proposed for the Tracy Fish Test Facility (TFTF), awaiting the recommendation from the South Delta Fish Facilities Forum.[29]

28. Reclamation and DWR developed a cost share strategy in 1992 based on the authority that CVPIA gives the federal government for the permanent barriers, which allocates the costs of the Grantline barrier 100% to the SWP, and the other three barriers are split 25% SWP / 75% Federal (split 37.5% non-reimbursable, and 37.5% reimbursable CVP). However, it was originally assumed that the temporary barriers were necessary for getting design information for the permanent barriers, thus they were assumed to be part of the cost of the permanent barriers.

Lower San Joaquin River Flood Control & Ecosystem Improvements—This project is expected to improve flood management and ecosystem restoration in the Lower San Joaquin River. The specific beneficiaries are not known at this time, but beneficiaries are expected to include the public from ecosystem improvements and local landowners from flood control.

The funding target is $11.6 million over 4 years. No funding is currently available for Lower San Joaquin River Flood Control & Ecosystem Improvements. 100% of the costs are allocated to the public (split 50-50 State and Federal). Federal funding is limited to existing authorities for this project at Reclamation and the U.S. Army Corps of Engineers (USACE). State funds will be used to cover planning costs to the extent that federal funds are unavailable. Planning costs may be reallocated to project beneficiaries if the project moves to construction.

Delta Cross Channel Re-Operation—This study involves investigations to re-operate the Cross-Channel gates and studying the feasibility of modifying slough entrances to improve water quality in the Delta without negatively impacting fish. Funding to date has been primarily from Proposition 13 (~$4 million for fish facility improvements in the Delta) and SWP (~$1 million). For Year 5, the minor remaining costs for this study are allocated to the CVP because CVP exporters also benefit but have not contributed.

Through Delta Facility—Planning for the Through Delta Facility includes feasibility studies for a diversion from the Sacramento River near Hood, in case the goals for continuous water quality improvements are not met by other means. Current research for the Through Delta Facility is estimated to cost $5.7 million. $5 million is available from the State ($4.9 million from Proposition 13 for fish facility improvements in the Delta and $100,000 from General Fund) and $700,000 is available from State Water Contractors, leaving no unmet needs for the current research and evaluations. No further funding will be allocated for this project until current evaluations are complete and more information is available to determine cost sharing arrangements and future funding targets for this project.

29. Approximately $20 million from Proposition 13 was provided to Reclamation by DWR for construction of the Tracy Fish Test Facility, based on a cost sharing arrangement of a 25% State cost share, based on CVPIA (3406(b)(4)). Since then, the scope of this project has changed, and the cost estimates have dropped significantly. For now, this funding will remain at Reclamation, since no other plan for those funds currently exists. If the TFTF does not go forward, or if the costs are lower than originally anticipated and the State interest is reduced, and there is a need identified for another project in the future that is appropriate to be funded by this section of Proposition 13, then this funding will be directed to another project.

North Delta Flood Control and Ecosystem Restoration Project—This project consists of actions to achieve well-integrated flood control and ecosystem restoration in the North Delta area. The cost to complete planning is $500,000, and sufficient funding is available from the General Fund. The EIR/EIS for flood improvements and ecosystem restoration in the North Delta will be completed in April 2005. No further funding will be allocated for this project until current studies are complete and more information is available to determine cost sharing arrangements and future funding targets for this project.

Clifton Court Forebay/Tracy Pumping Plant Intertie—This study looks at the potential operational benefits to both the CVP and SWP from an intertie between the Clifton Court Forebay and the Tracy pumping plant. The funding target is $2 million. No funding is available for this project. The costs for this study will be allocated to the SWP and CVP. The project contractors will negotiate the cost split. The table that follows assumes a 50-50 split.

5) Oversight, Coordination, and Science. $5.2 million is needed over 10 years, and $5.2 million is available, leaving no unmet needs.

ALLOCATION BY PERCENT

PROGRAM COMPONENTS	STATE	FED	WATER USERS SWP	WATER USERS CVP
Permanent Operable Barriers/8500cfs	87%	—	13%	—
Planning	—	—	100%	—
Construction (dredging, mitigation, and recreation)	100%	—	—	—
Interim South Delta Actions	—	—	100%	—
Delta Mendota Canal/California Aqueduct Intertie	—	—	—	100%
Planning Studies				
Small Delta Fish Protection Measures	75%	4%	21%	—
Tracy Fish Test Facility	—	—	—	—
Lower San Joaquin River Flood Control and Ecosystem Improvements	50%	50%	—	—
Delta Cross-Channel Re-Operation	33%	—	28%	39%
Through Delta Facility	88%	—	12%	—
North Delta Flood Control and Ecosystem Restoration Project	100%	—	—	—
Clifton Court Forebay/Tracy Pumping Plant Intertie	—	—	50%	50%
Oversight and Coordination	81%	—	19%	—
Total % Allocation	**59%**	**3%**	**23%**	**15%**

PERIODIC REVIEW

Some of the conveyance planning studies may not lead to construction. Ongoing hydrologic and environmental analyses are expected to provide information on which to base a decision about which studies should move to project construction, or alternative solutions may be recommended. Recommendations from the South Delta Fish Facilities Forum, as well as ongoing implementation and review of the Delta Improvements Package (DIP) are also expected to provide information that may lead to revisions of schedules and cost estimates.

POTENTIAL CAPITAL PROJECTS

The Conveyance Program is considering construction of several projects that have not been included in the Finance Plan because it is premature at this point to develop cost allocations until a decision is made on whether to proceed with construction, and until more information on costs and benefits is available. For these Potential Capital Projects, a future timeframe and check in point, and a process for developing cost allocations when it is timely, will be prepared. Information regarding each of these potential capital projects is described below.

1) CLIFTON COURT FISH SCREENS CONSTRUCTION (~$650 MILLION)

This project would construct full screens at Clifton Court Forebay in order to increase the permitted pumping capacity to the physical capacity of 10,300 cfs. However, a decision for a full screening project will not be made until more information is known from the South Delta fish protection studies (South Delta hydrodynamic investigations, short circuit alternative, CHTR study). These studies will be complete in 2006. In addition, the South Delta Fish Facilities Forum was created in 2002 by CALFED to address questions regarding investments in fish screens in the South Delta. A recommendation from the Forum is expected by the end of 2004 or early 2005.

2) TRACY FISH TEST FACILITY CONSTRUCTION (~$40 MILLION)

This project would build a 3-year temporary test facility to provide information that would help make a decision on the full screening of the Tracy and Banks pumping plants. The future status and need for this project is being reviewed by the South Delta Fish Facilities Forum and a recommendation to the CALFED agencies is expected by the end of 2004 or early 2005.

3) THROUGH DELTA FACILITY CONSTRUCTION (~$450 MILLION)

This project would build a diversion facility from the Sacramento River near Hood, in case the goals for continuous water quality improvements are not met by other means. Current research and evaluations of alternatives are funded and underway, and recommendations are expected by the end of 2006.

4) NORTH DELTA FLOOD CONTROL & ECOSYSTEM RESTORATION PROJECT (~$180 MILLION)

This project would consist of actions to achieve well-integrated flood control and ecosystem restoration in the North Delta area. The EIR/EIS for flood improvements and ecosystem restoration in the North Delta will be completed in April 2005. By the end of 2005, sufficient information should be available to propose funding allocations for construction of this project.

5) LOWER SAN JOAQUIN RIVER FLOOD CONTROL AND ECOSYSTEM IMPROVEMENTS (~$435 MILLION)

This project would improve flood protection and ecosystem restoration in the Lower San Joaquin River. Funding for planning is currently not available, but is proposed for 2007–2010. When planning is complete, more information will be available to propose funding allocations for construction of this project.

ISSUES

There are no remaining stakeholder or agency issues regarding the conveyance studies and projects.

Conveyance Program — Allocation by Dollars [1] ($ in millions)

Projects	Funding Targets	Available Funding					Additional Funding for Unmet Needs							
		State			Water Users	Total Available Funding	Unmet Needs	State			Federal Non-Reimbursable	Water Users		Total Additional Funding
		General Fund	Prop 13	Prop 50	SWP			Prop 13	Prop 50	Other[2]		SWP	CVP	
Permanent Operable Barriers/ 8500cfs														
Planning	**$13.0**				$8.0	**$8.0**	$5.0					$5.0		**$5.0**
Construction (includes dredging, mitigation & recreation)	**$87.1**		$53.2			**$53.2**	$33.9		$33.9					**$33.9**
Subtotal	**$100.1**	**$0.0**	**$53.2**	**$0.0**	**$8.0**	**$61.2**	**$38.9**	**$0.0**	**$33.9**	**$0.0**	**$0.0**	**$5.0**	**$0.0**	**$38.9**
Interim South Delta Actions														
Subtotal	**$24.7**	**$0.0**	**$0.0**	**$0.0**	**$7.5**	**$7.5**	**$17.2**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$17.2**	**$0.0**	**$17.2**
Delta Mendota Canal/ California Aqueduct Intertie [3]														
Subtotal	**$26.7**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$26.7**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$26.7**	**$26.7**
Planning Studies														
South Delta Fish Protection Measures	**$7.2**		$2.6	$0.2	$1.5	**$4.3**	$2.9	$2.1	$0.5		$0.3			**$2.9**
Tracy Fish Test Facility [4]	**$0.0**					**$0.0**								**$0.0**
Lower San Joaquin River Flood Control & Ecosystem Improvements	**$11.6**					**$0.0**	$11.6			$5.8	$5.8			**$11.6**
Delta Cross-Channel Re-Operation	**$1.8**		$0.6		$0.5	**$1.1**	$0.7						$0.7	**$0.7**
Through Delta Facility [5]	**$5.7**	$0.1	$4.9		$0.7	**$5.7**								**$0.0**
North Delta Flood Control & Ecosystem Restoration Project	**$0.5**	$0.5				**$0.5**								**$0.0**
Clifton Court Forebay/Tracy Pumping Plant Intertie	**$2.0**					**$0.0**	$2.0					$1.0	$1.0	**$2.0**
Subtotal	**$28.8**	**$0.6**	**$8.1**	**$0.2**	**$2.7**	**$11.6**	**$17.2**	**$2.1**	**$0.5**	**$5.8**	**$6.1**	**$1.0**	**$1.7**	**$17.2**
Oversight, Coordination, & Science														
Subtotal	**$5.2**	**$4.2**	**$0.0**	**$0.0**	**$1.0**	**$5.2**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**
TOTAL	**$185.4**	**$4.8**	**$61.3**	**$0.2**	**$19.2**	**$85.5**	**$99.9**	**$2.1**	**$34.4**	**$5.8**	**$6.1**	**$23.2**	**$28.4**	**$99.9**

1. Includes funding targets and allocations for Years 5-14 of the CALFED Program.
2. Other state funding could include future bonds, General Fund, or other new state funding sources.
3. Federal funding (possibly $1-3 million) may be available. To the extent federal funding is available, it would reduce the CVP share.
4. No funding for the TFTF is proposed at this time, pending a decision from the South Delta Fish Facilities Forum on this project.
5. Additional funding may be needed for planning (up to $13 million), depending on the outcome of the existing evaluations, and decisions expected in 2006.

SCIENCE PROGRAM

BACKGROUND AND FUNDING HISTORY

The CALFED Science Program is composed of the California Bay-Delta Authority (BDA) Science program and the Interagency Ecological Program (IEP).

The BDA Science program coordinates with each implementing agency and program element to address multiple science benefits across the CALFED Program as well as assists implementing agencies in planning science activities within the program elements. Each program element is responsible for implementing the best possible science available to address critical issues and gaps in information within the program element.

The CALFED Science program builds on the foundation of long-term investment in mandated monitoring programs established prior to the ROD, including the IEP. As an important component of the CALFED Science Program, the IEP for the San Francisco Bay / Sacramento-San Joaquin Estuary consists of nine member agencies, three State (Department of Water Resources (DWR), Department of Fish and Game (DFG), and State Water Resources Control Board (SWRCB), and six Federal (Fish and Wildlife Service (USFWS), Bureau of Reclamation (Reclamation), Geological Survey (USGS), Army Corps of Engineers (USACE), National Marine Fisheries Service (NMFS), and Environmental Protection Agency(USEPA)). These nine program partners work together to develop a better understanding of the estuary's ecology and the effects of the State Water Project (SWP) and Federal Central Valley Project (CVP) operations on the physical, chemical, and biological conditions of the San Francisco Bay-Delta estuary. The IEP is considered part of the CALFED Science Program because of its focus on Delta fisheries monitoring, although the Science Program coordinates with all the other existing monitoring as well.

The BDA Science Program coordinates formally with the IEP and science efforts being conducted by other CALFED program elements, as well as informally with other research and monitoring efforts going on throughout the state. IEP's main functions are to conduct compliance monitoring and provide information back to the regulatory and resource management agencies regarding the effects of diversions on the Estuary's aquatic resources. The Science Program, in contrast, emphasizes new knowledge about how environmental and management system work and interact across the entire CALFED solution area. The Science program is currently only emphasizing review and design of monitoring, but not expanding efforts like those done by IEP into the Sacramento and San Joaquin watersheds. The CALFED Science Program Budget Summary and Justification (see appendix) provides a detailed description for the funding target.

During the first four years the BDA Science Program and IEP's funding together has averaged about $22 million per year (ranging from a low of $15 million to a high of $34 million).

- For the BDA Science program—the State's General Fund and Proposition 50 have been the primary sources during the first four years. These two state sources have contributed about 90% of the program's budget, with the remaining 10% coming from the federal government. During the initial four years of activity, state and federal combined funding has averaged about $10 million per year (ranging from a low of $3 million to a high of $22 million).
- For the IEP—The IEP funding is established by permit conditions adopted by the SWRCB for the SWP and CVP. In total, the IEP has received about $11.6 million annually (ranging from a low of $8 million to a high of $15 million) during the first four years of the CALFED Program. During the past four years, federal costs for IEP have decreased, ranging from $4–7 million per year. The state share has declined slightly but otherwise has remained consistent. The SWP users have significantly increased their contribution in the last year years of the program. The IEP is substantially funded through SWP water user funding and federal nonreimbursable funding although CVP contractors question the federal accounting and indicates that IEP has some reimbursable funds from CVP contractors. Reclamation reports that some Central Valley Project Improvement Act Restoration Fund (CVPIA RF) contributions about $700,000 per year for IEP related activities but the funds are not directed at IEP in particular. Therefore, the CVP water users have not contributed to IEP in the past four years.

FINANCE PLAN

FUNDING TARGETS

The 10-year funding target for CALFED science is $437 million, divided between the two program components as follows: BDA Science Program $300 million, IEP $137 million.

The target for BDA science is based on the following considerations:

- More robust scientific information is needed to enhance real-time management of water and resources and evaluation of the effectiveness of CALFED strategies and actions is needed.
- Need to conduct ongoing independent reviews of the scientific basis of programs and projects.

- There is a critical need to turn existing monitoring data into information by increasing investments in data analysis and synthesis.
- Need to share scientific information with the public, decision makers, and the broader scientific community on system status and changes.

The target for IEP is based on the following considerations:

- Need to increase funding for monitoring, program reviews, data analysis and special studies to explain why status and trends change. The primary emphasis of the IEP program has been on compliance monitoring and data collection required in the terms and conditions in permits, orders, etc. issued by various regulatory authorities in support of short-term operational decisions.
- Increase in monitoring requirements.

PROPOSED ANNUAL TARGETS ($ in millions)

PROGRAM COMPONENT	
BDA Science Program	
High Priority Information Needs	$22.7
Identifying Important Scientific Issues	$3.6
Disseminating Scientific Information & Communication of Issues	$4.1
	Subtotal = $30.4
IEP	
Mandated Monitoring	$3.4
Non-mandated Monitoring	$2.8
Research/Special Studies	$1.3
Program Review	$0.2
Analysis/Reporting	$1.9
Staff Expertise	$0.4
Other Review	$0.6
Data Management	$1.8
Other Administrative & Management Cost	$1.3
Equipment Replacement	$0.4
	Subtotal = $14.0
Total	**$44.4**

AVAILABLE FUNDING

The BDA Science program currently has approximately $36 million (Propositions 50 and 13 and a minimal federal contribution) available to be used in the near term. This leaves an unmet funding need of approximately $264 million over the 10 years. IEP currently has approximately $12 million available to be used in the near-term leaving, an unmet funding need of approximately $126 million over 10 years.

FUNDING STRATEGY

BDA Allocation. BDA Science activities cross program element boundaries and benefit multiple objectives within CALFED. The BDA Science activities answer broad science questions that benefit the public. These public benefits support a funding allocation from public funds—which is to be shared equally at: 50% state, 50% federal.

BDA Science program attempts to integrate world-class science and peer review into every aspect of the CALFED Program. CALFED is developing the best scientific information possible to guide decisions and evaluate actions that are critical to its success. To that end, the BDA Science program provides information to guide decision makers both on a statewide and national level. Since federal and state taxpayers both benefit from Science, a 50-50 public share is included.

Other science programs exist in California. It may be possible to coordinate these programs to meet CALFED goals and objectives to provide a broader base for science funding. If these programs coordinate with the BDA Science program and can serve a dual purposes for both the specific program and CALFED objectives, it may cover some of the near-term gap.

It is unclear how much federal money will be available to fund BDA science activities. Historically, the federal government has not played a significant role in funding the Science Program. The federal cost share in the Finance Plan represents a significant increase. Possible sources of funding could be requested from federal agencies such as USGS, USEPA, Reclamation, USFW, or USACE.

New state funding for science is not expected to be available until Year 7 with possible sources including new State bonds, General Fund, or possibly other new state funding sources.

IEP Allocation. IEP science activities are strongly tied to monitoring and water operations in the delta. The monitoring and special studies IEP conducts greatly benefit water users in the area. As such, IEP science also benefits the public in our understanding of recovery of endangered species in the delta and other broad scientific benefits and so some public funds are included in the cost share. Furthermore, recreational users such as fishermen and local entities also benefit to a lesser extent and also are included in the allocation. The following allocation allows for a strong beneficiary pays principle where the primary beneficiaries are paying the largest share of the costs. Generally this follows past allocations, except to shift the majority of the federal funding to CVP water users.

The allocation proposed for IEP is as follows:

Federal	8%
State	3%
CVP	37%
SWP	44%
Recreational	7%
Local	1%

- CVP water users directly benefit from the IEP activities and are actually mandated to perform the monitoring associated with water operations. Therefore this Finance Plan allocates 37% of the cost to the CVP water users (shifting the Reclamation share to the CVP water users). CVP water users are scheduled to begin contributing in Year 6.

- SWP water users have received more benefits from the IEP activities and so pay a slightly larger share of the costs (44%).

- The remaining federal share for IEP contributed from the USEPA, USACE, USGS, USFWS, and the NMFS without the Reclamation contribution is approximately 8%. It is anticipated that these agencies will continue to contribute to the IEP at the same approximate level of funding.

- The recreation user share is derived from a dedicated stamp fund that fisherman pay into. Since anglers see a direct benefit to studies and monitoring performed by the IEP on fish populations etc, the Finance Plan continues to use the same level of funding received from the stamp fund at 7%.

- Local entities also gain some benefit from IEP performed activities and so are asked to contribute to a local match of 1%.

PERFORMANCE EVALUATION AND MONITORING PROGRAM

The Delta Improvements Package (DIP) Implementation Plan (page 8-9) directs implementing agencies to work with IEP to design a Performance Evaluation and Monitoring Program. This program is expected to evaluate the water quality and biological resource effects of the SWP, CVP, and the Delta activities described in the DIP, evaluate compliance with existing regulatory requirements (including the Multi-species Conservation Strategy and the SWRCB Water Right Decision 1641) and, evaluate progress towards achievement of CALFED Program goals, including continuous improvement in Delta water quality for all uses, and restoration and recovery targets for endangered species. Implementing agencies are unsure when the program will be online and there is uncertainty about what level of funding will be needed to maintain monitoring and performance evaluation activities generated by the DIP, and how those costs will be allocated and supported among the member agencies. Therefore, there is not enough information at this time to put forward a target or an allocation. However, DFG will prepare a proposed conceptual plan by January 2006 that will include costs and associated activities. The proposed plan will need to be submitted to the Science Program for external review and to the Independent Science Board for a recommendation on the proposed program to BDA.

ALLOCATION BY PERCENT

			WATER USERS		LOCAL MATCH	
PROGRAM COMPONENT	STATE	FED	SWP	CVP	REC. USER	OTHER LOCAL
BDA Science	50%	50%	—	—	—	—
IEP	3%	8%	44%	37%	7%	1%

PERIODIC REVIEW

An annual review of science activities and accounting of science spending within the CALFED program is performed through the program plan process for each program element. A periodic review of the BDA Science program and IEP, using established program performance measures to assess the status of the program and reevaluate the funding target is scheduled to occur every five years by the Independent Science Board and California Bay-Delta Authority.

In the near-term the CALFED Science Program is organizing an independent review of IEP that will focus on two basic questions:

- How can the suite of IEP projects and approaches be strengthened to more effectively meet program goals and objectives and be more useful for decision making under both existing and potential modest increases in program resources?
- Based on current knowledge of the Estuary, is IEP's approach to monitoring and determining the effect of operations on aquatic resources still technically valid and how could it be strengthened?

An independent panel of experts familiar with the scientific issues being addressed by IEP, as well as monitoring program management, environmental resource management, and science communication to decision makers will be convened by the Science Program in Spring of 2005. This panel will engage in informal fact-finding during March and April, and be presented with information compiled by IEP in April. The panel will then convene in a public workshop setting to hear both from core IEP program agencies about accom-

plishments and products, agency representatives depending on IEP data and information for decision-making, and from stakeholder representatives. The panel will then present draft recommendations at the conclusion of the workshop, and final written recommendations within 4 weeks after its conclusion.

Information from the IEP programmatic review, the crosscut budgets being prepared as part of the upcoming 2005 CALFED program plan process, and proposed science projects emerging from the BDA Science Program PSP in late spring of 2005 will all serve to support more detailed discussions about the strategic organization and execution of Delta science and compliance monitoring into the future. IEP Finance Plan targets may be updated to reflect newly received information from the review.

ISSUES

Overall Funding Target. While water users acknowledge the importance of a robust and sustainable Science Program, some have questioned whether the funding target is too high.

CVP water user allocation. The CVP water users and Reclamation do not support the shift from Reclamation federal taxpayer funding to CVP water user funding for the IEP.

Science Program — Allocation Summary by Year ($ in millions)

Program Year	Funding Targets	Available Funding								Additional Funding for Unmet Needs							
		State		Federal	Water Users	Local Match		Total Available Funding	Unmet Needs	State	Federal	Water Users		Local Match		Total Additional Funding
		Prop 13	Prop 50 [1]		SWP	Recreation User Stamp Fund [2]	Other Local					SWP	CVP	Recreation User Stamp Fund [2]	Other Local	
Year 5	**$41.4**	$2.0	$26.2	$4.8	$6.2	$0.8	$0.2	**$40.1**	$1.3		$1.3					**$1.3**
Year 6	**$44.0**		$7.4					**$7.4**	$36.6	$7.9	$16.1	$6.2	$5.2	$1.0	$0.1	**$36.5**
Year 7	**$44.0**							**$0.0**	$44.0	$15.4	$16.1	$6.2	$5.2	$1.0	$0.1	**$44.0**
Year 8	**$44.0**							**$0.0**	$44.0	$15.4	$16.1	$6.2	$5.2	$1.0	$0.1	**$44.0**
Year 9	**$44.0**							**$0.0**	$44.0	$15.4	$16.1	$6.2	$5.2	$1.0	$0.1	**$44.0**
Year 10	**$44.0**							**$0.0**	$44.0	$15.4	$16.1	$6.2	$5.2	$1.0	$0.1	**$44.0**
Year 11	**$44.0**							**$0.0**	$44.0	$15.4	$16.1	$6.2	$5.2	$1.0	$0.1	**$44.0**
Year 12	**$44.0**							**$0.0**	$44.0	$15.4	$16.1	$6.2	$5.2	$1.0	$0.1	**$44.0**
Year 13	**$44.0**							**$0.0**	$44.0	$15.4	$16.1	$6.2	$5.2	$1.0	$0.1	**$44.0**
Year 14	**$44.0**							**$0.0**	$44.0	$15.4	$16.1	$6.2	$5.2	$1.0	$0.1	**$44.0**
TOTAL	**$437.4**	**$2.0**	**$33.6**	**$4.8**	**$6.2**	**$0.8**	**$0.2**	**$47.5**	**$389.9**	**$131.1**	**$146.4**	**$55.4**	**$46.6**	**$8.8**	**$1.3**	**$389.8**

1. Includes $12.5m unspent Proposition 50 money from prior years.

2. Includes striped bass stamp funding and future delta sport fishing enhancement stamp funding.

3. The Interagency Ecological Program (IEP) funding is established by permit conditions adopted by the SWRCB for the State Water Project and Central Valley Project. For this reason, the IEP is substantially funded through user-related resources.

Science Program — Allocation by Dollars ($ in millions)

Program Year	Funding Targets	Available Funding								Additional Funding for Unmet Needs							
		State		Federal	Water Users	Local Match		Total Available Funding	Unmet Needs	State	Federal	Water Users		Local Match		Total Additional Funding
		Prop 13	Prop 50 [1]		SWP	Recreation User Stamp Fund [2]	Other Local					SWP	CVP	Recreation User Stamp Fund [2]	Other Local	
BDA Science Program																
Year 5	**$30.0**	$2.0	$25.9	$0.8				**$28.7**	$1.3		$1.3					**$1.3**
Year 6	**$30.0**		$7.1					**$7.1**	$22.9	$7.9	$15.0					**$22.9**
Year 7	**$30.0**							**$0.0**	$30.0	$15.0	$15.0					**$30.0**
Year 8	**$30.0**							**$0.0**	$30.0	$15.0	$15.0					**$30.0**
Year 9	**$30.0**							**$0.0**	$30.0	$15.0	$15.0					**$30.0**
Year 10	**$30.0**							**$0.0**	$30.0	$15.0	$15.0					**$30.0**
Year 11	**$30.0**							**$0.0**	$30.0	$15.0	$15.0					**$30.0**
Year 12	**$30.0**							**$0.0**	$30.0	$15.0	$15.0					**$30.0**
Year 13	**$30.0**							**$0.0**	$30.0	$15.0	$15.0					**$30.0**
Year 14	**$30.0**							**$0.0**	$30.0	$15.0	$15.0					**$30.0**
Subtotal	**$300.0**	**$2.0**	**$33.0**	**$0.8**	**$0.0**	**$0.0**	**$0.0**	**$35.8**	**$264.2**	**$127.9**	**$136.3**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$264.2**
Interagency Ecological Program (IEP)																
Year 5	**$11.4**		$0.3	$4.0	$6.2	$0.8	$0.2	**$11.4**								**$0.0**
Year 6	**$14.0**		$0.3					**$0.3**	$13.7		$1.1	$6.2	$5.2	$1.0	$0.1	**$13.6**
Year 7	**$14.0**							**$0.0**	$14.0	$0.4	$1.1	$6.2	$5.2	$1.0	$0.1	**$14.0**
Year 8	**$14.0**							**$0.0**	$14.0	$0.4	$1.1	$6.2	$5.2	$1.0	$0.1	**$14.0**
Year 9	**$14.0**							**$0.0**	$14.0	$0.4	$1.1	$6.2	$5.2	$1.0	$0.1	**$14.0**
Year 10	**$14.0**							**$0.0**	$14.0	$0.4	$1.1	$6.2	$5.2	$1.0	$0.1	**$14.0**
Year 11	**$14.0**							**$0.0**	$14.0	$0.4	$1.1	$6.2	$5.2	$1.0	$0.1	**$14.0**
Year 12	**$14.0**							**$0.0**	$14.0	$0.4	$1.1	$6.2	$5.2	$1.0	$0.1	**$14.0**
Year 13	**$14.0**							**$0.0**	$14.0	$0.4	$1.1	$6.2	$5.2	$1.0	$0.1	**$14.0**
Year 14	**$14.0**							**$0.0**	$14.0	$0.4	$1.1	$6.2	$5.2	$1.0	$0.1	**$14.0**
Subtotal	**$137.4**	**$0.0**	**$0.6**	**$4.0**	**$6.2**	**$0.8**	**$0.2**	**$11.7**	**$125.7**	**$3.2**	**$10.1**	**$55.4**	**$46.6**	**$8.8**	**$1.3**	**$125.6**
TOTAL	**$437.4**	**$2.0**	**$33.6**	**$4.8**	**$6.2**	**$0.8**	**$0.2**	**$47.5**	**$389.9**	**$131.1**	**$146.4**	**$55.4**	**$46.6**	**$8.8**	**$1.3**	**$389.8**

OVERSIGHT AND COORDINATION

BACKGROUND AND FUNDING HISTORY

The California Bay-Delta Authority's Oversight and Coordination (O&C) program element includes those functions necessary for the operation of any large organization such as executive and staff management, legal support and financial analysis; and those that are unique to the Bay-Delta Program, such as regional coordination, finance and budget coordination, environmental justice (EJ) and tribal relations, public involvement and water management strategies.

The BDA oversees and helps coordinate the activities of the 24 state and federal agencies working cooperatively through the CALFED Program to improve the quality and reliability of California's water supplies while restoring the Bay-Delta ecosystem. The California Bay-Delta Authority Act of 2003 established the Authority as the new governance structure for CALFED and charged it with providing accountability, ensuring balanced implementation, tracking and assessing Program progress, using sound science, assuring public involvement and outreach, and coordinating and integrating related government programs. The staff is guided by the Authority and helps provide direction to implementing agencies. As an essential part of implementation, oversight and coordination is a vital component of the CALFED process, providing a forum for discussion, public accountability, and assisting in Program integration. The coordination between the State and federal agencies is necessary to achieve balanced implementation of the 11 program elements and is made easier by the oversight provided by the staff at the Authority.

O&C expenditures have averaged about $10.6 million annually over the first four years of the Bay-Delta Program (ranging from a high of $11 million and a low of $9 million). To date, the program has been funded largely through public funds. State General Fund contributions, which have averaged about $9.5 million per year over the past four years, account for the largest share of O&C funding with the reminder made up of federal appropriations. The State has funded almost 89% of O&C costs, while the federal government has funded the rest at 11%.

FINANCE PLAN

FUNDING TARGETS

The funding target for Oversight and Coordination (O&C) is $121 million over 10 years ($12.1 million per year). The $12.1 million/year is for the following program functions.

PROPOSED ANNUAL TARGETS ($ in millions)

PROGRAM COMPONENT	
Executive/Legal/Contracts/Fiscal/HR/IT	$6.70
Public Affairs	$0.80
Environmental Justice	$0.42
Support for BDPAC	$0.20
Program Tracking	$1.10
Regional Coordination	$1.00
Finance Planning	$0.60
Permit Coordination	$0.90
Tribal Relations	$0.40
Total	**$12.12**

AVAILABLE FUNDING

Approximately $73.8 million in existing resources is available over the next 10 years. This assumes the State will continue to fund the program at the same level as Year 5 at approximately $7.2 million per year.

FUNDING STRATEGY

The funding strategy allocates O&C costs as follows: State 60%, Federal 40%. This allocation is based on the following considerations:

- The functions of the O&C element are fundamental to the operation and success of the CALFED program. While apportioning the cost of the O&C element among all the CALFED expenditures and funding sources is an option; it is not proposed because the link between the benefits of the O&C element and the nonpublic beneficiaries (e.g. water users) is difficult to identify and describe. In addition, it is a higher priority at this time to identify benefits and allocate costs to the water users in other program elements such as the ERP, EWA, and Levees programs.
- The distribution of costs between the state and federal governments is based on the limitations currently set in the Federal CALFED authorization bill (HR 2828). The CALFED bill authorizes $25 million over 5 years (beginning in Year 5) for the federal share of Program oversight. After this federal authorization expires, in Year 10, it is expected that continuing federal authorization will be sought.
- The State share of costs is slightly higher that federal because the BDA functions primarily as a State agency. However, BDA has federal members and participates in the federal process so a federal share is appropriate.

The finance strategy is heavily dependent on future state and federal appropriations. To address additional EJ and Tribal relations needs, the State will need to request State funding beginning in Year 7. To fill the gap left by lack of federal authorization dollars, the State will need to request a greater amount of General Fund in Year 10.

PERIODIC REVIEW

The O&C budget is reviewed annually through the program plan process. As a activity becomes more established or is scaled down such as the Finance Plan, costs may decrease and funds may be shifted to activities that have increasing funding needs, such as the formulation of the regional profiles.

ISSUES

Environmental Justice. The Environmental Justice community is concerned about the level of funding for EJ activities in CALFED. The O&C target proposes an increase of approximately $300,000 per year for both Tribal and EJ activities. In addition to this funding, additional funds are available in each program element budget to implement EJ and Tribal activities such as outreach and directed actions. These directed actions can vary in cost and can vary by program element depending upon what projects are currently active or being proposed. The range expected will be between $100,000-$500,000 per project or per year. For example, a directed action could consist of a joint project with ERP and WQ where a survey is used to gather data where EJ communities are consuming what types of fish to ascertain mercury effects on the EJ community.

Oversight & Coordination Program — Allocation by Dollars ($ in millions)

Program Year	Funding Targets	Available Funding			Additional Funding for Unmet Needs			
		State General Fund	Federal	Total Available Funding	Unmet Needs	State	Federal	Total Additional Funding
Year 5	**$12.1**	$7.2	$1.8	**$9.0**	$3.2		$3.2	**$3.2**
Year 6	**$12.1**	$7.2		**$7.2**	$4.9		$4.9	**$4.9**
Year 7	**$12.1**	$7.2		**$7.2**	$4.9	$0.1	$4.8	**$4.9**
Year 8	**$12.1**	$7.2		**$7.2**	$4.9	$0.1	$4.8	**$4.9**
Year 9	**$12.1**	$7.2		**$7.2**	$4.9	$0.1	$4.8	**$4.9**
Year 10	**$12.1**	$7.2		**$7.2**	$4.9	$2.5	$2.5	**$5.0**
Year 11	**$12.1**	$7.2		**$7.2**	$4.9	$0.1	$4.8	**$4.9**
Year 12	**$12.1**	$7.2		**$7.2**	$4.9	$0.1	$4.8	**$4.9**
Year 13	**$12.1**	$7.2		**$7.2**	$4.9	$0.1	$4.8	**$4.9**
Year 14	**$12.1**	$7.2		**$7.2**	$4.9	$0.1	$4.8	**$4.9**
TOTAL	**$121.2**	**$72.0**	**$1.8**	**$73.8**	**$47.5**	**$3.2**	**$44.3**	**$47.5**

1. Assumes full funding from Federal CALFED authorizing legislation (HR 2828) of $25m until 2010 for BDA.

2. The federal share in Year 10 is lower because it includes the amount remaining from the $25m cap in authorizing legislation. The state share is higher to make up the difference. Federal amounts for Years 11-14 assume reauthorization to maintain funding levels and allocation from previous years.

APPENDICES

BUDGET JUSTIFICATIONS

APPENDIX A:
ECOSYSTEM RESTORATION PROGRAM (ERP)

The Ecosystem Restoration Program (ERP) is designed to (1) maintain, improve, and increase aquatic and terrestrial habitats and improve ecological functions in the San Francisco Bay and Sacramento-San Joaquin Delta (Bay-Delta) to support sustainable populations of diverse and valuable plant and animal species; (2) achieve recovery of at-risk species dependent on the Delta and Suisun Bay; and (3) support the recovery of at-risk species in San Francisco Bay and in the watershed above the estuary. The ERP is essential to sustaining environmental regulatory compliance across all Bay-Delta Program elements.

ERP activities are generally identified through open and competitive processes. The ERP intends to continue emphasizing local input, integration with other activities, science (especially independent peer review) and public transparency in decisions about which specific activities to fund in support of priorities identified in ERP planning documents. The following information reflects how the ERP Implementing Agencies and BDA expect that they and their partners anticipate allocating funding identified in the Finance Plan.

Some assumptions were used to develop these 10-year funding targets:

- The ERP would have a minimum of $150 million available annually.
- Based on review of ERP projects funded to date and future ERP targets and ERP/Multi-Species Conservation Strategy (MSCS) milestones, $150 million will not be sufficient for the ERP to implement all ERP actions or meet all ERP targets by 2030. (The Draft Finance Options Report indicated that the ERP would need $240 million annually to meet ERP targets by 2030.)
- Lacking sufficient funds to implement all actions and meet all targets, the ERP will focus on meeting ERP/MSCS milestones and on additional actions that contribute to recovery of MSCS species, especially for those species for which the CALFED Program is responsible for recovery.

The tasks and activities identified here are consistent with those identified in the ERP's Multi-Year Program Plans and Annual Annotated Budget for Implementing the Single Blueprint for Restoration and Recovery. The primary tasks are: planning, research, implementation, monitoring, and oversight and coordination. The following information is presented by task with annual projected expenditures. For those activities that fall under more than one task, the activity is listed under its primary task. Note that many planning, research, and monitoring activities occur as part of broader implementation activities, consistent with the ERP's adaptive management approach. Annual projected expenditures are based on the ERP's prior allocations, with the expectation that the ERP will need to invest a greater portion of the available funds in monitoring activities as the number of previously supported projects that require continued monitoring grows and as the program focuses on measuring program performance.

1) PLANNING ($4.5 MILLION)

Planning activities include staff efforts in regional ERP planning, revising the Draft Stage 1 Implementation Plan, topic or watershed specific management or restoration planning, developing priorities for solicitations based on these planning documents, and grant or directed actions that primarily address local planning and stewardship programs. The ERP will continue to develop the Delta Regional Ecosystem Restoration Implementation Plan and the Suisun Marsh Implementation Plan, and expects to initiate regional plans for the Sacramento, San

Joaquin, and Bay regions. These regional plans will be the primary means by which the ERP reviews and revises targets, actions, and milestones. The ERP also expects to participate in the development of additional strategy documents, similar to the Mercury Strategy, to address high priority topics. For example, ERP will develop a conservation strategy for giant garter snakes and other wetland dependent species that includes specific "wildlife friendly agriculture" implementation approaches. In addition, an implementation plan will be developed consistent with the Mercury Strategy. Another key activity will be to continue to develop and implement a strategy for improving and integrating databases fundamental to planning and tracking the success of the ERP. Other ongoing activities include planning associated with the Fish Passage Improvement Program and Yolo Basin planning.

2) RESEARCH ($5.25 MILLION)

Research activities include investigations to improve understanding of the Bay-Delta ecosystem and the species that depend upon it, including physical processes, habitats, and ecosystem stressors. It also includes efforts to resolve critical uncertainties and impediments to restoration as identified in the Strategic Plan for Ecosystem Restoration. These activities are expected to complement those research activities supported by the Science Program, but to be more narrowly focused on ERP needs. Ongoing activities include the Salmon and Steelhead Genetics Archive Support, Upper Yuba River Studies, and a number of other projects including mercury and dissolved organic carbon research.

3) IMPLEMENTATION ($122.25 MILLION)

Implementation activities include efforts towards habitat restoration, projects to improve environmental water and sediment quality, environmental education, environmental water management including water purchases, fish screen and fish ladder construction, and projects to control non-native invasive species. Where appropriate, the ERP expects to emphasize projects that assist farmers in integrating agricultural activities with these ecosystem restoration efforts. The design and engineering component of projects and the related environmental permits and documents that lead directly to implementation also are included. Project specific monitoring is included as an implementation element. In some cases, ongoing stewardship of completed restoration projects may also be included. Areas of emphasis are expected to be on MSCS-covered species, their habitats, the processes that sustain their habitats, and the stressors that affect them. These activities include completing habitat restoration activities in areas where the ERP has invested funds in pre-restoration activities, completing fish screen and passage projects initiated in prior years, continuing to implement the Non-native Invasive Species Program and the Environmental Water Program, and on following up on efforts to address the low dissolved oxygen problem in the lower San Joaquin River.

4) MONITORING ($15 MILLION)

Monitoring activities include specific projects designed to gather project-specific generated data, efforts to assess restoration progress on a regional scale, and projects to continue the collection of long-term trend information for species, habitats, physical processes, and stressors. Focus will be on monitoring the status and trends of MSCS-covered species, their habitats, the processes that sustain their habitats, and the stressors that affect them. Support for monitoring also includes the Programmatic Quality Assurance and Quality Control for CALFED-related mercury research and monitoring projects, the operation and maintenance of flow monitoring stations that are part of an effort to assess and manage instream flows in five eastside Sacramento River tributaries, assembly and management of all ERP-related monitoring data, and support for a web-based data management and sharing structure.

5) OVERSIGHT AND COORDINATION ($3 MILLION)

Oversight and coordination include CALFED agency coordination for restoration, activities of BDA regional restoration coordinators, review and assistance with regulatory compliance issues, developing annual work plans, developing the Annotated Budget for Implementing the Single Blueprint for Restoration and Recovery, administering proposal or grant solicitation processes, coordinating management of grants and contracts for restoration projects, developing cross-cut budgets, and developing and reviewing State budget change proposals. These efforts also include providing support for the ERP Science Board, the Ecosystem Restoration and Working Landscapes subcommittees of the Bay-Delta Public Advisory Committee.

Ecosystem Restoration Program ($ in millions)

Program Components	Target
Planning	$4.5
Research	$5.3
Implementation	$122.3
Habitat Restoration	$55.5
Environmental Water and Sediment Quality	$18.0
Environmental Education	$0.8
Environmental Water Management	$10.5
Fish Screens and Passage	$22.5
Non-native Invasive Species	$15.0
Monitoring	$15.0
Program Oversight and Coordination	$3.0
TOTAL	**$150.0**

APPENDIX B:
WATERSHED PROGRAM

The Watershed Program is a multifaceted set of activities designed to encourage, support and enhance the ability of local communities to manage watersheds within the Bay Delta program solution area. Improved management will contribute to the achievement of local, regional, and system wide goals, including the overarching goals of the Bay Delta Program and many of the more specific goals, objectives and targets of the component programs that make up the Bay-Delta Program.

Some basic assumptions were used to develop these 10-year funding targets:

- In the early years, program effort will remain focused on capacity building, watershed assessment, planning, education and outreach activities. These activities are the underpinnings of improved community watershed management.
- In later years effort will shift towards the implementation of specific projects, locally developed programs, effectiveness monitoring, adaptive management, and improved science.
- The use of competitive grants as a means to pursue program objectives will decrease over time as the Program gains knowledge of watershed conditions, management capacity increases and as commissioned assessment and planning activities become available to guide management actions and projects that further the goals of the CALFED Bay-Delta Program.
- As emphasis on the use of competitive grants decrease, funding will increasingly shift toward directed actions. These directed actions will include funding support to assist with the implementation of watershed plans and locally developed watershed programs.
- The need for "watershed coordination" and technical assistance of various types will continue.
- Periodic performance assessments will guide the rate at which funds are moved from assessment and planning to implementation support.

The BDA staff proposes a funding target of $42 million per year to address Watershed Program needs. The following is a breakdown of average annual costs and a description of activities associated with a $42 million per year funding target.

1) COMPETITIVE GRANTS ($21.30 MILLION)

To date, competitive grants have been used as a primary tool to initiate, advance and expand the capabilities of local efforts and organizations to assess current watershed conditions and potential; develop watershed scale plans and undertake specific projects. A concerted effort has been made to provide grants to a broad range of activities throughout the solution area. A continuing need for these basic development efforts, with increased emphasis on providing financial assistance for the creation of comprehensive watershed assessments, plans, and ambient monitoring programs is clear. This need is best met using a competitive grant program. Full funding of this activity would allow the program to meet identified assessment and planning targets (80% of the solution area with appropriate watershed assessments and comprehensive watershed management plans) over the next 10-years. The program anticipates that substantial capacity to manage watersheds will emerge from this investment. As management capacity emerges, emphasis on open competitive grants will decrease.

2) DIRECTED ACTIONS ($8.4 MILLION)

As emphasis on the use of competitive grants as a program

implementation tool decreases, the implementation of "directed actions" will increase. Directed actions will be specific local programs, projects, or actions designed to achieve specific natural resource objectives identified by the Bay Delta Program. It is anticipated that these specific programs and projects will emerge from the development activities pursued during the early years of program implementation, and guided by performance results of the Watershed program. Actions may be targeted by topic and/or geography, and will support the balanced implementation of the CALFED Bay-Delta Program.

3) TECHNICAL ASSISTANCE ($4.37 MILLION)

Technical assistance- the availability of specific expertise to assist local communities to assess, plan, manage, monitor and evaluate watershed management efforts is a vital component of the Watershed Program. A modest level of assistance, primarily through State agencies, has been made available by the program to date. During the next 10 years, the program will target funding to expand and enhance the level of technical assistance available from state and federal agencies, and other sources such as universities or private sources. The staffing target for agency assistance is 20 PY's for the next 10 years. The types of assistance available will be determined by periodic needs analysis.

4) PARTNERSHIP SEMINARS AND LOCAL WATERSHED COORDINATORS ($3.65 MILLION)

These two tools have been used effectively to expand the level of expertise and knowledge available to promote, support and conduct local watershed management activities. The program will continue to conduct these important activities throughout the next 10-year period. Funding for Watershed Coordinators within a particular watershed will decline over this time as local capacity (and funding support) emerges and implementation of management activities at the local level increase. Overall cost for the activity for the 10-year period will remain stable with support shifting over time to different watershed and communities to meet coordination needs.

5) PROGRAM PERFORMANCE EVALUATION ($100,000)

Program performance will be evaluated in detail every three years. Evaluation will include detailed assessment of program outputs and outcomes as described in the Watershed Program performance plan. These periodic evaluations will be used to inform the program on progress, and to guide the direction and emphasis of future program actions.

6) SCIENCE SUPPORT ($1.25 MILLION)

The program is committed to the advancement of science to better inform and evaluate watershed management efforts supported by the program. The Program will establish a science advisory panel in Year 5 and use the panel to guide investigations into ecological functions, economic descriptions and modeling of those functions, and to guide an analysis of the ecological results of management on the function and values of the watershed in the Bay Delta system. Several other activities identified in the current Multi year Watershed Program will be carried out including; developing a multivariate model for watershed function, establishment and monitoring of "reference watersheds" and reestablishment and operation of key hydrologic gauging stations.

7) PROGRAM ADMINISTRATION ($3.2 MILLION)

This is the estimated cost for Implementing Agencies to administer grant programs and for the Authority to carryout oversight and coordination responsibilities.

Watershed Program — Funding Targets ($ in millions)

Program Components	Average Annual	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	10- year Total
Competitive Grants	$ 21.30	$ 26.20	$ 26.20	$ 26.20	$ 22.40	$ 22.40	$ 22.40	$ 16.80	$ 16.80	$ 16.80	$ 16.80	**$ 213.00**
Directed Actions	$ 8.40	$ 2.80	$ 2.80	$ 2.80	$ 7.60	$ 7.60	$ 7.60	$ 13.20	$ 13.20	$ 13.20	$ 13.20	**$ 84.00**
Technical Assistance	$ 4.37	$ 4.00	$ 4.00	$ 4.00	$ 4.00	$ 4.00	$ 4.20	$ 4.50	$ 4.50	$ 5.50	$ 5.00	**$ 43.70**
Partnership Seminars	$ 0.30	$ 0.30	$ 0.30	$ 0.30	$ 0.30	$ 0.30	$ 0.30	$ 0.30	$ 0.30	$ 0.30	$ 0.30	**$ 3.00**
Local Coordinator Support	$ 3.35	$ 3.25	$ 3.25	$ 3.30	$ 3.30	$ 3.30	$ 3.40	$ 3.40	$ 3.40	$ 3.40	$ 3.50	**$ 33.50**
Program Performance Tracking	$ 0.10			$ 0.30			$ 0.30				$ 0.50	**$ 1.10**
Science Support	$ 1.25	$ 0.90	$ 3.90	$ 1.02	$ 1.15	$ 0.90	$ 1.15	$ 0.90	$ 0.90	$ 0.90	$ 0.90	**$ 12.62**
Program Administration	$ 3.20	$ 3.20	$ 3.20	$ 3.20	$ 3.20	$ 3.20	$ 3.20	$ 3.20	$ 3.20	$ 3.20	$ 3.20	**$ 32.00**
Total	**$ 42.27**	**$ 40.65**	**$ 43.65**	**$ 41.12**	**$ 41.95**	**$ 41.70**	**$ 42.55**	**$ 42.30**	**$ 42.30**	**$ 43.30**	**$ 43.40**	**$ 422.92**

This scenario is based on the following assumptions:

1. Competitive grants will decrease over time as the Program gains knowledge of watershed conditions.
2. Directed actions will increase over time as a picture of local parts of the Bay-Delta system conditions emerge and coalesce.
3. Funds from grants and directed actions will be targeted for capacity building, assessment, planning, education and outreach in the early years.
4. Funds from grants and directed actions will shift to plan implementation, projects, status and effectiveness monitoring, adaptive management in later years.
5. Periodic performance assessments will guide the rate at which funds are moved from assessment and planning to implementation support.
6. Science support activities are those currently identified in the program multiyear plan.
7. Adjustments for inflation are not included.

APPENDIX C:
SCIENCE PROGRAM

BDA SCIENCE

The BDA Science activities have three broad goals:

- Identify important scientific issues that cross CALFED program boundaries.
- Invest in high-quality science to address critical information needs of the CALFED program
- Disseminate new scientific information to the broad CALFED community and educate the citizens of California in these issues.

The BDA science program proposes approximately $22.67 million to address critical scientific information needs of CALFED, and $7.73 million to carry out independent reviews, support the Independent Science Board, develop and provide program guidance, and fully staff inter- program coordination, communication, and management functions of the Science Program (see table) for a total proposed target of $30.4 million.

FILLING HIGH PRIORITY INFORMATION NEEDS ($22.67 MILLION)

The goal of this aspect of the program is to address important CALFED-wide information needs through a competitive grants program designed to ensure high quality technical work and encourage innovative approaches to long-standing questions.

Identification of high priority information needs takes place through a process that begins with two separate efforts—staff work identified in #1 and recommendations from the Independent Science Board (and other standing Boards and review panels) on one side, and issues raised by CALFED managers and stakeholders during the course of public workshops and discussions on the other. The issues are then compiled by the Lead Scientist and program staff into recommended priorities the multi-year program plan, and further refined based on public comment and BDA action. A competitive grant program is then be used to address those priority information needs .

1) PRIORITY INFORMATION GRANTS PROGRAM ($19.48 MILLION)

The goals of the grants program are to identify priority issue areas where CALFED needs new information, communicate these management information needs to the research community, and to select high-quality studies in support of those needs through a transparent and competitive process. There are several aspects of the grant funding process that will require a dedicated staff and are relatively fixed costs regardless of the amount of funds being disbursed.

Program Components	Proposed Annual Target ($ in millions)
Priority Information Grants Program	**$19.48**
Staff Costs	$1.58
Review	$0.40
Grants	$17.50

These amounts include:

- Developing and processing yearly requests for proposals;
- Establishing a continuous funding base to support innovative science;
- Developing a contracting procedure using national approaches, and;
- Maintaining transparency in process. Staffing costs required to manage an annual grant making process and the awarded contracts and review costs would need to be included. Grants totaling to advance scientific understanding in the

following priority topic areas would be awarded each year.
- Oversight of the Post Doc Program (see next item)

The budget for the grants program ($17.5 million) was developed based on several considerations:
- Information needs identified through multiple review processes and workshops, such as the Delta smelt workshop, the Environmental Water Account review, and several workshops on water operations and biological resources (see http://science.calwater.ca.gov/workshop for documentation).
- An expenditure rate of about $12 million by the Science Program on directed studies between 2002 and 2003. In addition, although we are still 2 months away from the filing deadline, there are 150 proposals active in our PSP system and we expect over $100 million in requests to come in January of 2004.
- Level of funding of science efforts such as the multidisciplinary studies at Franks tract and the Delta Cross Channel over the past 3-5 years; and
- Estimates of the costs of conducting studies relevant to information needs (see below for examples)

The $17.5 million per year budget for grants, based on these considerations, appears to be a low to moderate level of funding in comparison to the expressed type and degree of information needs.

The following table illustrates this conclusion. It is hypothetical breakdown of how $17.5 million might be allocated at the end of a competitive process across specific priority topic areas. This hypothetical breakdown was developed by the Lead Scientist in 2003 as part of the program plan process.

Program Components	Proposed Annual Target ($ in millions)
Grants	**$17.50**
Salmonids	$0.80
Smelt	$0.80
Other at-risk species	$0.40
Data Synthesis and Decision Support	$0.80
Invasive Species	$0.80
Multidisciplinary Delta Science	$5.10
Multidisciplinary River Science	$5.10
Improve Modeling	$1.00
System-wide Changes and Performance Implications	$2.70

The two examples from this hypothetical allocation that best illustrate the conclusion of low to moderate funding are salmon and smelt-related information needs.
- Salmonids —Program information needs include expanding salmon modeling, data analysis, understanding the role of predation, life history needs in the Delta, information gaps identified in NOAA fisheries recovery plan—funding any one of these would cost about $0.8million;
- Smelt —Program information needs include expanding analyses of samples collected during current monitoring, basic biological studies, and salmon modeling—additional analyses of current samples and population modeling alone would cost $1.4 million per year;

Example Science Costs	Projected Target ($ in millions)	Length of Study (Years)
Delta Cross Channel Multidisciplinary Studies	$4.80	2.5
Selenium Fate and Transport Delta Study (Franks Tract Hydrodynamic Results)	$2.60	3
Delta Smelt Otolith Analyses	$1.00	1
Prepare Salmon Scale Samples	$0.45	2
Delta Smelt Modeling	$0.60	2
Delta Shallow Water Habitat Use Analyses	$0.45	2
Field Reconnaissance Study in Juvenile Salmon	$0.16	1
Pilot Study for Performance Assessment of Tidal Wetland Restoration	$3.70	3

Similar information could be presented for the other topics in the above table.

The vision is to conduct an open solicitation each year, awarding up to $17.5 million in each round. If applicants/studies that are important to CALFED are not submitted into the process and/or are not of sufficient technical quality, the Science Program will solicit studies for those needs for the subsequent years' process.

2) APPLYING NEW TALENT TO PRIORITY INFORMATION NEEDS—POST DOCTORAL SCHOLARS AND GRADUATE FELLOWSHIPS PROGRAM ($3.19 MILLION)

The purposes of this program are to address four deficiencies in the organization and practice of science across CALFED: a) there is a systemic lack of investment in turning monitoring data into information and knowledge through rigorous and peer-reviewed analyses; b) scientific staff within agencies do not consistently have access to new scientific tools and techniques being developed in the research community; c) there is an unusual degree of separation between the agency and research scientific communities; and d) there is a broad need to expand the recruitment of new scientists into agency staffing systems.

This program will be run like the competitive grants program, with students applying to do research related to CALFED priority topic issues identified in the main PSP, but targeted towards individual postdoctoral graduate and with

additional requirements that funded postdoctoral researchers will collaborate with agency scientists, and participate in CALFED Science Program events. This element is currently being administered by UC San Diego/ Sea Grant with involvement by the Science Program in designing the call for proposals and selecting fellows The vision is to have an annual solicitation for a cohort of post-docs.

IDENTIFYING IMPORTANT SCIENTIFIC ISSUES ($3.58 MILLION)

The goal of this aspect of the program is to identify issues that are and that will be of substantial concern regionally, over the long-term, and that affect CALFED's goals of water and ecosystem sustainability. We will have several mechanisms to do this:

1) INDEPENDENT SCIENCE BOARD ($1.5 MILLION)

The ISB is one main player in this. They will identify problems, do some preliminary exploration on those problems, and bring them to the forefront by presenting them to the ISB, BDA, and the broader community. The ISB will also directly advise BDA on high priority technical issues, and serve as the peer review body for performance measures developed within CALFED.

2) WORKSHOPS ($1.73 MILLION)

Workshops are excellent venues for identifying issues and getting a broad view of what the important questions are and how to go about solving those. We will identify topics for workshops should be identified in three ways: by the ISB (covered in 1a above); by Science Program staff, and; by the broader scientific-stakeholder-agency community. A senior-level person (Ph.D. in science or closely related field) will manage the workshop program. This budget is designed to support 6 single-issue workshops and 2 major program reviews per year. Currently, several workshops related to SWRCB triennial review issues, water operations & biology, delta smelt, and salmonids are being planned.

3) FRAMING MANAGEMENT INFORMATION NEEDS IN TERMS OF SCIENTIFIC QUESTIONS ($350,000)

There is a role for rotating fulltime senior staff in the Science Program to identify problems and helping address BDA questions/needs and building research agendas with other program elements. This will lead to review papers based on CALFED data and addressing important issues. This would involve bringing in co-authors from outside the program (from agencies, academia, stakeholders, etc.). This may follow a workshop, an ISB directive or be generated by staff in the Science Program or within other programs in CALFED, or from anywhere. These positions will be directly assist the Lead Scientist but have broad authority to work with anyone to identify problems, obtain data, identify co-authors, and initiate and finalize writing and publication of reports/articles. Another aspect of this position will be to help the Lead Scientist incorporate the latest research questions into the Science Program science agenda and future requests for proposals.

DISSEMINATING SCIENTIFIC INFORMATION AND COMMUNICATION OF ISSUES ($4.15 MILLION)

Disseminating the up-to-date and high-quality information about important issues is crucial to everything CALFED does. We need to transfer a broad array of information to a vast array of people about what we do, why it is important and what we can expect in the future. Californians and California water supply systems, ecosystems and landscapes will undergo tremendous pressure and change in the future. Citizens of California need to understand the complexity of these problems and be part of the solution. A major obligation of the Science Program is to educate the community at several levels:

1) SCIENCE TO THE CALFED COMMUNITY ($900,000)

It is critical to get information into the agencies that need to use it, as well as the broader CALFED stakeholder community. The function of this program component is to clearly describe to members of the CALFED community the results of scientific investments and the potential ramifications of new information to resource management. Multiple tools for communicating and disseminating information will be used, including the "Science in Action" inserts, publications like the "Management Cues," and ongoing posting of all Science Program products on the web. This is critical to our mission and will require a dedicated senior staff position.

2) SCIENCE TO SCIENCE COMMUNICATION ($850,000)

The Science Conference is a great example of how to get information to the scientific community. Another in-house outlet is the online journal. The Science Program needs resources to continue and strengthen these outlets to foster understanding of what we are doing in CALFED and how it can be used to help solve problems. We will expand this effort to get broader recognition for CALFED work by additional efforts to publish papers in a wider array of peer-reviewed journals and review articles in national journals showing what CALFED does and why it is important to the broad water issues in California and other states.

3) PROGRAM COORDINATION WITH CALFED AGENCIES ($720,000)

The science program will need to further develop its efforts within BDA to respond to important information requests,

develop program plans and coordinate agendas with other programs. Although much of this work will be done by the Deputy Director for Science in consultation with the Lead Scientist, the program needs additional resources and staff to better respond to this important need within BDA. This will include guiding peer review and performance measures across BDA programs, developing programs for special workshops to research important "emergency" or "rapid-response" issues.

4) MONITORING DESIGN & REVIEW TEAM ($1.08 MILLION)

The Science Program plays a central role in supporting existing and new science-based monitoring efforts across CALFED. This team will perform four functions: provide guidance and expert advice to agency staff involved in designing performance-based monitoring (both in-house expertise and science advisors in disciplines specific to monitoring needs); identify and capitalize on opportunities for leveraging support from non-CALFED sources, such as the NSF GLOBE program, to enhance citizen and other monitoring efforts; conduct internal assessments of large-scale monitoring efforts as to the effectiveness of these efforts in providing information to answer CALFED management questions; and coordinate with senior agency managers running monitoring efforts under CALFED and ensure that regular reviews of ongoing efforts are carried out.

BDA Science Program ($ in millions)

Program Component	Proposed Annual Target	% of Proposed Budget
High Priority Information Needs		
Priority Information Grants Program	$19.48	64%
Post Doctoral Scholars and Graduate Fellowships Program	$3.19	10%
Subtotal	**$22.67**	**75%**
Identifying Important Scientific Issues		
Independent Science Board	$1.50	5%
Workshops & Review	$1.73	6%
Framing Management Information Needs in Terms of Scientific Questions	$0.35	1%
Subtotal	**$3.58**	**12%**
Disseminating Scientific Information and Communication of Issues		
Science to the CALFED Community	$0.90	3%
Science to Science Communication	$0.85	3%
Program Coordination with CALFED Agencies	$0.72	2%
Monitoring Design & Evaluation Team	$1.08	4%
Consortia	$0.61	2%
Subtotal	**$4.15**	**14%**
Total	**$30.40**	**100%**

INTERAGENCY ECOLOGICAL PROGRAM (IEP)

As an important component of the CALFED Science Program, the IEP for the San Francisco Bay / Sacramento-San Joaquin Estuary consists of nine member agencies, three State (Department of Water Resources (DWR), Department of Fish and Game, and State Water Resources Control Board (SWRCB), and six Federal (Fish and Wildlife Service, Bureau of Reclamation (Reclamation), Geological Survey, Army Corps of Engineers, National Marine Fisheries Service, and Environmental Protection Agency). These nine program partners work together to develop a better understanding of the estuary's ecology and the effects of the State Water Project (SWP) and Federal Central Valley Project (CVP) operations on the physical, chemical, and biological conditions of the San Francisco Bay-Delta estuary. The IEP is considered part of the CALFED Science Program because of its focus on Delta fisheries monitoring, although the Science Program coordinates with all the other existing monitoring as well.

1) MANDATED MONITORING ($3.35 MILLION)

This component consists of the data collection aspects of the monitoring carried out as required by State Water Resource Control Board water permit (D-1641) and NOAA Fisheries and US Fish and Wildlife biological opinions for Central Valley Project and State Water Project operations. Data from these monitoring efforts comprise most of the long-term datasets available for the estuary; the oldest dating back to 1959. This data has been used extensively by resource agencies and academia to study the San Francisco Estuary. These monitoring efforts provide data and information on status and trends of estuarine physical, chemical and biological properties, including abundance indices for listed fish species. These monitoring programs are instrumental in early detection of newly introduced species into the estuary and are used by the California Department of Fish and Game to evaluate proposed and existing regulation.

2) NON-MANDATED MONITORING ($2.85 MILLION)

This component consists of the data collection activities associated with monitoring that is not mandated, but none the less important to define trends and supply data needed to understand estuarine mechanistic processes. Examples of this work include continuous tide and flow monitoring in the delta, adult sturgeon and striped bass population, and the delta shoreline fishes survey.

3) RESEARCH/SPECIAL STUDY ($1.27 MILLION)

The studies in this category are designed to provide mechanistic understanding of physical, chemical and ecological processes. These studies last from one to four years to address a specific question or hypothesis typically and are carried out by a combination of agency and academic researchers. As work is completed, new studies are implemented. This category includes some of the data collection work carried out by post-doctorate researchers. Specifically these studies are used to develop and evaluate new methods and technologies, develop and apply hydrodynamic and biological models, and where possible support work that complements grants and research funded by other sources.

4) PROGRAM REVIEW ($220,000)

This category comprises the time staff spends reviewing the study elements for scientific soundness, effectiveness, usefulness, and potential areas of improvement. These programmatic and management reviews are done periodically among the monitoring studies to ensure the data and information gathered is appropriate and relevant to present needs.

5) ANALYSIS/REPORTING ($1.87 MILLION)

This category contains the time spent compiling and analyzing the monitoring and special studies data into meaningful information and preparing reports or otherwise making the information available through peer-reviewed articles, technical reports, internet web pages and newsletter articles. These analyses and publications serve to disseminate the information to scientific community and to present it to management and policy makers in a concise manner. The work done by post-doctoral researchers falls mostly into this category.

6) STAFF EXPERTISE ($350,000)

This category accounts staff time spent participating, presenting and testifying at workshops, conferences, OCAP and EWA meetings, project work teams and water rights hearings. Active participation in these forums is not only required by agency responsibilities in some cases, but also ensures information is disseminated accurately and widely.

7) OTHER REVIEWS ($600,000)

This category is the time spent on reviewing and commenting on study proposals, newsletter articles, technical reports and chapters, journal submittals and written materials. These reviews give assurance that data is analyzed correctly and information is accurately reported. Reviews of study proposals are necessary to ensure funding and resources are given to studies that will likely provide needed information and leads to meeting the IEP's goals and objectives.

8) DATA MANAGEMENT ($1.84 MILLION)

This category accounts for all aspects of data management and the computer infrastructure needed to support it. All data entry, QA/QC, programming, internet web page development and support, system development and maintenance and general computer support is captured in this category.

9) OTHER ADMINISTRATIVE & MANAGEMENT COSTS ($1.28 MILLION)

This category includes program support staff for developing budgets, preparing contracts and other management time not accounted for in existing categories.

10) EQUIPMENT ($390,000)

This item estimates the costs to replace equipment valued over $20,000. The majority of these costs are research vessels, but included are vehicles and major pieces of hydrodynamic monitoring equipment. The cost have been totaled for 10 years and divided evenly across the years although actual timing of the expenditures will vary.

Interagency Ecological Program ($ in millions)

Program Components	Target
Mandated monitoring	$3.35
Non-mandated monitoring	$2.85
Research/special studies	$1.27
Program review	$0.22
Analysis/reporting	$1.87
Staff expertise	$0.35
Other review	$0.60
Data management	$1.84
Other administrative and management cost	$1.28
Equipment replacement	$0.39
Total	**$14.02**

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